Molecular **PATHOLOGY** Workflow Solution

Catalog 2020

(International)

• IHC • ISH • FISH • miRNA • SS

BioGenex

Accelerating the pace of precision medicine

Dear Customer,

We are pleased to present the BioGenex Molecular Pathology Catalog. As a vertically integrated company, we develop, manufacture and market highly innovative and fully automated systems for cancer diagnosis, prognosis and therapy selection.

Xmatrx® systems redefine complete automation for the molecular pathology laboratory and standardize the protocol from baking through final cover-slipping in three simple steps - Load, Click and View. Compared to any other system on the market, Xmatrx® systems offer clean intense stain(s), automate more assay steps, and enable automation of technologies for the future molecular pathology laboratory.

- Xmatrx® ELITE integrates All-in-One staining of IHC, ISH, special stains and beyond
- Xmatrx® Infinity is a high-performance staining platform for life sciences and translational research
- Xmatrx® ULTRA Dx is the next-generation system with new features such as Auto Drain, Auto DAB mixing and with new technologies
- Xmatrx® ULTRA Rx is the next-generation system with new features and technologies for life sciences and translation research
- NanoMtrx® 300 is a fully-automated, 30-slide benchtop compact system with micro-chamber® for IHC and ISH
- NanoMtrx® 100 is a fully-automated, 10-slide benchtop compact system with micro-chamber® for IHC and ISH
- NanoVIP® is a ten-slide automated system specifically designed for FISH
- Xmatrx® MINI enables *in situ* PCR and nucleic acid hybridization with tools for building micro-chamber

We also offer a series of i6000™ systems with very high throughput: 200 slides in an 8-hour shift.

To maintain our tradition of offering superior solutions for the emerging needs of your laboratory, we offer a broad range of molecular pathology products for IHC, ISH, miRNA, multiplex and special staining of tissues including 400+ primary antibodies, molecular probes, detection systems, and ancillaries. These are offered for standardized, reliable and consistent results to support the needs of molecular pathology laboratories of today, tomorrow and beyond.

BioGenex is committed to the core values of innovation, reliability, productivity, quality, superior after-sales support and service for complete customer satisfaction. These values are represented by our company's colors that stand for "energy and innovation" (orange) and "reliability" (blue). We unconditionally guarantee all of our products and services.

I invite you to learn more about our exciting products and future development through this catalog and our new website at www.biogenex.com. Should you have any suggestions for improving our products and services, I encourage you to write me directly at k.kalra@biogenex.com.

Give us an opportunity and experience the difference.

Warm Regards,
Krishan Kalra, Ph.D.
CEO

"To become a global molecular medicine company providing affordable solutions for life science research and personalized medicine"

Dr. Krishan Kalra

- Innovation
- Quality
- Service
- Reliability
- Productivity

Table of Contents

For latest product offerings visit our website **www.biogenex.com** or contact our customer support: **customer.service@biogenex.com**

Overview

BioGenex celebrated its 38th anniversary serving the anatomic pathology market. We take great pride in providing premier service and support while bringing new and technologically advanced products to the market.

BioGenex provides a "Total Solution" for slide-based cell and tissue analysis. Our products include a wide variety of antibodies, highly sensitive detection kits, automated systems, probes and ancillary products. Our automated systems streamline operations in molecular and cellular pathology laboratories, providing effective tools for the detection and diagnosis of cancer and other diseases. BioGenex continues to innovate as evidenced by the launch of the Xmatrx® Staining System which provides complete automation "From Microtome to Microscope".

We are committed to providing our customers and our distributors with flexible, innovative and cost-effective tools for clinical diagnostics, life science research and drug discovery.

Service

We value you and your business. We want our relationship to be one of total satisfaction. Our Technical Support Specialists provide fast troubleshooting advice and technical information and they are responsive to your individual needs. Just visit our website at www.biogenex.com, send an e-mail to support@biogenex.com or call toll free at 1-(800)-421-4149 from 7:00 AM to 4:00 PM (PST), Monday through Friday, with your request.

Quality

BioGenex is committed to excellence by providing high-quality products. We offer a broad range of products which are manufactured using state-of-the-art equipment in controlled environments. They are stringently tested to ensure that they meet or exceed functional, dimensional, and environmental requirements and are compliant with federal regulations. Our automated systems are designed for high-throughput at a low cost of ownership. They provide consistent quality results with ease-of-use and maximum flexibility for clinical diagnostics, life science research, and drug discovery markets.

Reliability

BioGenex products give consistent, reproducible and reliable results. Our automated systems are highly reliable and dependable, giving our customer peace of mind.

Innovation

BioGenex has a rich history of innovation in the field of Immunohistochemistry (IHC) and *In situ* Hybridization (ISH). BioGenex has a strong intellectual portfolio, consisting of several US and foreign-issued patents, in the areas of

- DNA labeling and amplification
- Antigen retrieval and deparaffinization
- Automation of tissue and cell sample preparation
- Automated IHC, and staining of nucleic acids
- Nucleic acid retrieval for tissues

Productivity

BioGenex has automated cell and tissue analysis to accelerate clinical diagnostics and drug discovery development. We have developed the total walk-away, industrial scale automated systems to streamline and standardize an array of processes for cell and tissue testing in IHC, ISH/CISH, FISH, and image analysis applications. We offer a "Total Solution" automating every aspect of the histology slide preparation "From Microtome to Microscope". These technologies significantly increase laboratory operation productivity for clinical diagnostics, drug discovery and life sciences research applications by providing high-quality staining and imaging solutions.

Ordering Information

BioGenex Customer Service

Please call our Customer Service department from 07:00 A.M. to 04:00 P.M. (PST), Monday through Friday, to place an order or to inquire about an existing order.

Telephone (toll-free)	1-(800)-421-4149 (Option 1)
Fax	1-(510)-824-1490
Online Orders	www.biogenex.com
E-mail	customer.service@biogenex.com
Mail Orders	BioGenex Laboratories, Inc. Attention to: Customer Service 48810 Kato Road, Suite 200E Fremont, CA 94538

Quote request can also be placed via our website.
To expedite the order process, please include the following information on your purchase order or correspondence:

- Purchase order number
- Customer number
- Name, phone and fax number of person ordering
- Shipping address (please do not use P.O. Box number)
- Billing address (if different from above)
- Name of product, catalog number, quantity, and price
- Special shipping instructions
- Credit card number and expiration date (for credit card payments)

International Orders

To place an order from outside the US, please contact your local BioGenex channel partner/ distributor. For online orders please visit our website www.biogenex.com For countries where BioGenex does not have any channel partners/distributors, please e-mail us at internationalcs@biogenex.com

Opening a New BioGenex Account

First time orders paid by credit card (see under Payment) will be processed and shipped immediately. For other payment methods please accept a delivery time of up to five business days for credit verification purposes.

Credit Terms

Net 30 days in U.S. Dollars, upon approval. Overdue accounts are subject to a finance charge of 1.5% per month (18% per annum).

Confirming Orders

To avoid duplication of your shipment, please mark boldly “confirming order - please do not ship” on your order.

Pricing

All prices are quoted in U.S. dollars, exclusive of state and county sales tax, where applicable. Prices are valid only for shipments within U.S. and are subject to change without notice. Please inquire about our standing order and quantity discount policies.

Shipping

Shipping and handling charges are prepaid and added to the invoice. They vary with the destination, weight and content, and are available upon request at order entry and are indicated on the invoice. Reagent orders received by 2:00 P.M. (PST), Monday through Thursday, will generally be Expedited Shipping for Next Day Delivery. Early A.M. and Saturday delivery is available upon request.

Payment

All payments must be made in U.S. dollars. The following methods of payment are accepted:

- Bank transfer (see invoice for instructions)
- Check, drawn on a U.S. bank, made payable to: “BioGenex Laboratories, Inc.”
- MasterCard®
- Visa®
- American Express®

Return Policy

Reagents are covered by the following Total Quality Assurance policy which states:

If you are not completely satisfied with the quality of our reagents, you may return them to us along with poor stained slides and filled RMA form for a refund or replacement, at our option.

BioGenex’ s liability is limited to a refund or replacement, at our option.

Please obtain a Return Material Authorization (RMA) number from Customer Service prior to the return of a product.

Returns, which are caused by unsatisfactory product performance, must be made within 30 days of delivery and will be subject to a 30% restocking fee.

Returns or replacements cannot be accommodated for expired products.

As BioGenex is an ISO13485 and USFDA compliant IVD manufacture, we can’t accept returned products without return material authorization, RMA. All returned products without RMA will be trashed.

General Information

Web Site

Upgraded

For the latest information on new product releases listed pricing, special offers and for placing an online order, please visit our new website, **www.biogenex.com**

Customer Support

Our technical support and customer service specialists are ready to provide fast and detailed Information for your questions and needs. Please call our toll-free number to reach us.

Customer Service USA

Tel: 1-(800)-421-4149 (Option 1)
Fax: 1-(510)-824-1490
E-mail: customer.service@biogenex.com

Technical Support USA

Tel: 1-(800)-421-4149 (Option 2)
Fax: 1-(510)-824-1490
E-mail: support@biogenex.com
Website: www.biogenex.com

Corporate Office

BioGenex Laboratories, Inc.
48810 Kato Road, Suite 200E
Fremont, CA 94538
Tel: 1-(800)-421-4149
Fax: 1-(510)-824-1490

Corporate Business

For general business matters not related to product orders or inquiries, please call us at 1-(800)-421-4149 or fax your correspondence to our main corporate business fax: 1-(510) 824-1490.

Trademarks

The following are trademarks of BioGenex Laboratories, Inc. USA

BioGenex®
EZ-Retriever®
Super Sensitive™
EZ-DeWax™
*i*500 Plus™
Power Block™
AccuSlide®
OptiPlus™
InSite®
XWash™
EZ-AR™
MultiLink®
*i*6000™
GenoMx®
Xmatrx®
XMount™
XViz™
Super Mount®
XISH™
eXACT™
NanoMtrx®

Additional Information

Nationwide Training Workshops

As a service to our customers, BioGenex has developed lectures and workshops on the full range of Immunohistochemistry and *in situ* Hybridization techniques. Please call our Technical Support Department or Regional Account Executive for more information on how you can participate in our educational workshops. Topics include the following:

- Basic Immunohistochemistry
- Cancer Panels
- Microwave-Based Antigen Retrieval
- ER/PR Immunostaining
- Troubleshooting
- Automation
- *in situ* Hybridization
- Double Staining
- Multiplexing and Co-detection of Protein and Nucleic Acid Biomarkers

Free Technical Literature

In addition to the educational brochures produced by BioGenex, we offer other technically useful information to the histopathology specialists on our website, www.biogenex.com where you can download our data sheet, product catalog or relevant presentation that may accompany each product assay protocols, kit instruction manuals and conference posters. Please call our Technical support department to request specific items or to add your name to our mailing list.

Technology Partnering Opportunities

We are always interested in licensing innovative technology that will be useful to our customers. If you are a researcher and have new antibody clones or other new diagnostic technologies please think of BioGenex as a potential partner in marketing your inventions and discoveries. We have the scientific expertise and marketing experience necessary for the successful commercialization of your technical achievements. BioGenex has an active Research and Development program fully staffed with PhD and MD professionals who are experienced in immunopathology, protein chemistry, and molecular biology. For more information on technology transfer opportunities, please contact us at customer.service@biogenex.com

Technical Information

All BioGenex products have been listed in this catalog under easily identifiable product groups. The products have also been indexed at end of the catalog under the following headings:

- Alphabetical Product Name Index
- Catalog Number Index
- Antibody Clone Index
- Listing By Categories

Symbol keys used in different sections have been defined on the same page for quick and easy reference.

The BioGenex Molecular Pathology Catalog is also available on our website, www.biogenex.com

Automation

Automated Platforms for Molecular Pathology

BioGenex is a pioneer in the design, development and manufacturing of advanced systems for automation of cell- and tissue-based staining. To accommodate diverse laboratory needs, we offer an array of clinical and research automation platforms that meet globally accepted quality standards (ISO13485:2016 & ISO9001:2015), are approved by the FDA and are specifically designed to improve laboratory workflow, productivity, and reproducibility.

Xmatrx® systems (NanoVIP, MINI, INFINITY, ELITE and ULTRA) are the direct result of our innovative platform technology innovation. They offer a variety of automation, throughput and assay applications. Our key technology differentiators include the eXACT™ temperature control and reaction micro-chamber- improving IHC results and enabling Nucleic Acid-based Diagnostics (NADx).

i6000™ Elite systems (Rx and Dx) are robust high-throughput platforms for IHC and Special-Stain staining with staining capacity of 200 slides in 8 hours. These systems are supplied together with the EZ-Retriever®, for Microwave-based Dewaxing and Antigen Retrieval.

1. Clinical platforms, support LIMS connectivity for data tracking and management, contain Barcode enabled technologies and include over 400+ optimized protocols with ready to use reagents in barcode labeled vials (Xmatrx®, i6000™). These systems are FDA approved for In Vitro Diagnostic (IVD) applications including: immuno-histochemistry (IHC), *in situ* hybridization (ISH), co- detection and special staining.

Clinical Platforms / Application	IHC	ISH/CISH	Double Staining	Special Stains
Xmatrx® ELITE	√	√	√	√
Xmatrx® ULTRA Dx	√	√	√	√
i6000™ Diagnostics	√	NA	√	√

2. Research platforms, offer infinite possibilities for translational and clinical research. They include flexible open system software for easily creating, editing and saving protocols and enable automation of any slide-based assay including immuno-histochemistry (IHC), *in situ* hybridization (ISH), fluorescence *in situ* hybridization (FISH), immuno-fluorescence (IF), co-detection and multiplex applications (double and triple stains; IHC/ISH), in situ PCR, micro-RNA and special staining.

Research Platforms / Application	IHC	ISH/CISH	Double Staining	Special Stains	FISH	IF	miRNA ISH	Multiplexing (ISH + IHC)	*In Situ* PCR
Xmatrx® Infinity	√	√	√	√	√	√	√	√	√
Xmatrx® ULTRA Rx	√	√	√	√	√	√	√	√	√
i6000™ Infinity	√	NA	√	√	NA	√	NA	NA	NA
NanoMtrx® 300	√	√	NA	NA	NA	NA	√	NA	NA
NanoMtrx® 100	√	√	NA	NA	NA	NA	√	NA	NA

3. Nucleic Acid Diagnostics (NAD) dedicated Platforms: NanoVIP and MINI, are the most economical and flexible automation platforms for FISH, ISH and *In-Situ* PCR. These systems are small in size, contain 10 independent eXACT™ thermal cyclers that can run 10 different protocols simultaneously. These instruments contain on-board wash and waste drainage systems, audio-visual alerts and a user-friendly software with ability to add or delete cycles, store protocols for future use and perform, deparaffinization, antigen retrieval, hybridization, washing and up to 45 PCR cycles.

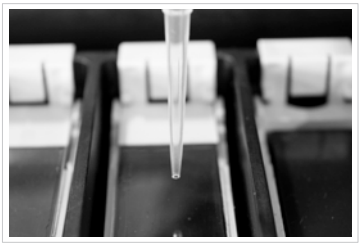
NAD Platforms / Application	ISH/CISH	FISH	miRNA ISH	*In Situ* PCR
NanoVIP®	√	√	√	√
Xmatrx® MINI	√	√	√	√

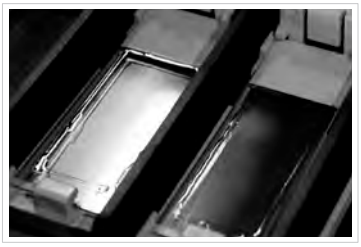
4. Other Systems: The EZ-Retriever® system is designed to work seamlessly with i6000™, providing Eco-friendly De-waxing, Rehydration and Antigen Retrieval in one step, for high-throughput applications. The system provides uniform heating and optimized factory protocols, assuring clean, intense and reproducible staining results. The i500™ Plus is a LIMS enabled barcode label printer for integrated digitized data tracking.

Other Systems	Description
EZ-Retriever®	Pre-treatment and antigen retrieval system using a programmable microwave oven with built-in temperature control
i500 Plus™	LIMS enabled barcode label printer compatible with Xmatrx® and i6000™

Clinical Platforms

Xmatrx® ELITE





Three Simple Steps

Load ➡ Click ➡ View

The most advanced fully automated system for IHC, ISH, SS Co-detection, and multiplexing

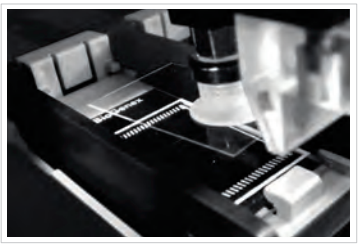
- 40 independent protocols simultaneously
- Fully automated, including baking, dewaxing & antigen retrieval
- eXACT™ temperature control on every slide (RT-105 °C)
- Bar-Coded reagent vials and slides to eliminates human errors
- Wide reagent dispense volumes: 10 µL to 850 µL
- BioGenex's proprietary coverslip mechanism
- Over 400+ optimized protocols with ready-to-use (RTU) reagents
- LIMS - enabled data tracking and management*
- Liquid level sensor for accurate reagent handling
- System allows use of 3rd party antibodies

* optional software

internationalcs@biogenex.com

Xmatrx® ULTRADx

Next Generation Fully Automated Staining System



All-in-One - IHC, ISH, SS and Co-detection

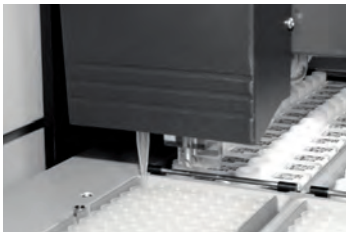
Fully Automated System from Microtome to Microscope... For the Molecular Pathology Laboratory of Present, Future and Beyond

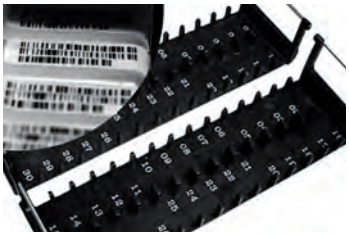
- Next generation fully-automated slide staining system with Baking, Dewaxing & Antigen Retrieval
- Auto-DAB enabled – On-board automated mixing of chromogen and buffer
- 40 independent protocols simultaneously
- Bar-Coded reagent vials and slides to eliminates human errors
- eXACT™ temperature control on every slide (RT-105 °C)
- Wide reagent dispense volumes: 10 µL to 850 µL
- Auto drain disposal system
- Liquid level sensor for accurate reagent handling
- BioGenex's proprietary coverslip mechanism
- LIMS - enabled data tracking and management
- High throughput - 100 slides per day, 60 slides in eight-hour shift, and 40 slides in delayed overnight run
- Over 400 optimized protocols with ready to use reagents in barcoded vials
- Intuitive software designed for ease-of-use and flexibility
- System allows use of 3rd party antibodies
- Multiple slide processing options – Random, Continuous and STAT
- Work Flow status indicator

* To be released

i6000™ Diagnostics

Walkaway IHC Staining System





IHC, Multiplex and Special Stains System

- Clean, crisp and intense stains
- High throughput – Up to 200 slides in eight-hour shift, 60 slides in 3 hours
- Over 400+ optimized protocols with ready to use reagents in barcoded vials
- Dispense reagents as low as 100 µL/slide
- Multiple slide processing options - Random, Continuous and STAT
- Multi-format specimen processing - FFPE or frozen tissues, cell preparations, fine needle aspirates, smears and more...
- Color-coded GUI with real-time assay parameter display for all slides
- Customized or standard reports for inventory management and regulatory compliance and submission

Clinical Platforms Specification

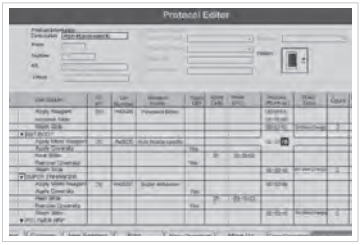
Specifications	Xmatrx® ULTRA Dx*	Xmatrx® ELITE	i6000™ Diagnostics
Automation	Full (baking through cover slip)	Full (baking through cover slip	Automated. Supplied with EZ-Retriever® for Dewax & Antigen retrieval
Run Time (full slide load)	5.5 hours	5.5 hours	2.5 hours
Throughput (8 hours)	60 slides	60 slides	200 slides
Temperature Range	Ambient to 105°C	Ambient to 105°C	NA
Reagent Dispensing Volume	10-850 µL	10-850 µL	100-1000 µL
Slide Capacity	40	40	60
Reagent Capacity	42	49	60
Reader	Barcode	Barcode	Barcode
Bulk Reagent Carboy	7 x 4 L	7 x 4 L	2 x 10 L
Waste Container	20 L	8 L	20 L
Languages enabled	English	English	English, Chinese, German
LIMS - enabled data tracking and management	√	√	√
Protocols	>400, preloaded	>400, preloaded	>400, preloaded
Dimensions (D/W/H)	30”/43”/54”	29”/46”/59”	24”/40.5”/18.5”
Weight	419 lb / 190 kg	400 lb/ 182 kg	130 lb / 59 kg

* To be released

Research Platforms

Xmatrx® Infinity

Infinite Possibilities...
...For Translational and Clinical Research

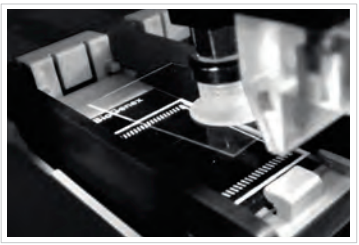


All-in-One - IHC, IF, ISH, CISH, FISH, SS, *in situ* PCR and miRNA...

- Intelligent and flexible system offering infinite possibilities – IHC, ISH, FISH, SS, CISH, IF, Multiplexing and Co-detection
- Simultaneous optimization of up to 40 parameters in single run
- Reaction micro-chamber reduces micro-reagent consumption by up to 90%
- 40 independent thermocyclable (PCR) workstations
- Intuitive software designed for ease of use and flexibility
- Reports for inventory management and regulatory compliance
- Multiple slide processing options – Random, Continuous and STAT

Xmatrx® ULTRARx

Infinite Possibilities...
...For Translational and Clinical Research

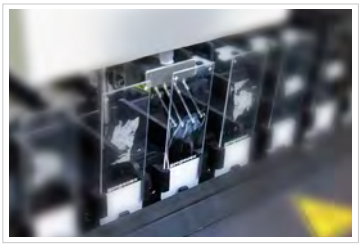


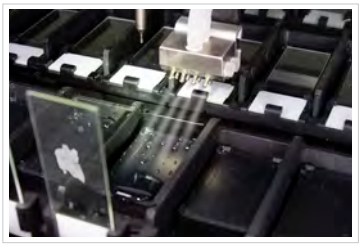
All-in-One - IHC, IF, ISH, CISH, SS, FISH, *in situ* PCR and miRNA...

- Intelligent and flexible offering infinite possibilities - IHC, ISH, FISH, IF, SS, Multiplexing and co-detection
- Auto-DAB enabled – On-board automated mixing of chromogen and buffer
- Simultaneous optimization of up to 40 parameters in single run
- Reaction micro-chamber reduces micro-reagent consumption by up to 90%
- eXACT™ temperature control on every slide (RT-105 °C)
- Intuitive software designed for ease of use and flexibility
- Reports for inventory management and regulatory compliance
- Multiple slide processing options – Random, Continuous and STAT
- Wide reagent dispense volumes: 850 µL
- Ease waste disposal system
- Liquid level sensor for accurate reagent handling
- BioGenex's proprietary coverslip mechanism
- Work Flow status indicator

* To be released

NanoMtrx® 300





State-of-the-art • Fully Automated All-In-One IHC, ISH, and Special Stains

- Compact 30 slide benchtop system
- 30 slides under 2.5 hours
- Generates 70% less waste
- Separates hazardous waste
- Uses standard slides
- Easy set-up and low maintenance

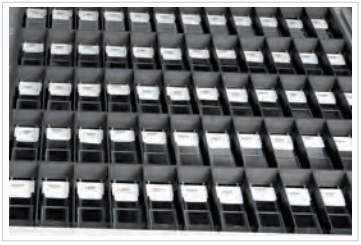
NanoMtrx®100

State-of-the-art • Fully Automated IHC and ISH System

- Multi-format specimen processing: FFPE, frozen, cell preparations, smears, and FNAs
- Micro-chamber® for uniform staining throughout the slide
- Temperature controlled micro-chambers® for minimal reagent consumption
- Gentle wash and blow-dry to eliminate tissue lift-off
- On-board auto-DAB mixing
- Generates 70% less waste
- Fast turnaround time of 2 hours with simultaneous 10 slide processing
- Intuitive user-friendly GUI

i6000™ Infinity

Multifunctional Staining System for Research



Multi-functional System - Multiplex IHC, IF and Special Stains

- Fully open system to customize any manual protocol
- Simultaneous optimization of up to 60 assay parameters
- Disposable pipette tips – eliminates cross contamination
- Audio and visual alerts at every step for manual intervention
- Customized reporting system for detailed report generation
- Multiple slide processing options – Random, Continuous and STAT

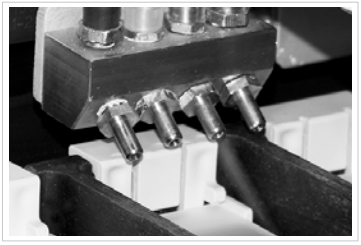
Research Platforms Specification

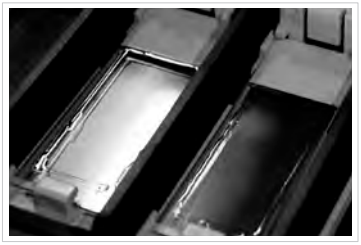
Specifications	Xmatrx® ULTRA Rx	Xmatrx® Infinity	i6000™ ELITE Rx
Automation	Full (baking through cover slip)	Full (baking through cover slip)	Automated staining
Run Time (full slide load)	Open System / User defined	Open System / User defined	Open System / User defined
Temperature Range	Ambient to 105 °C	Ambient to 105 °C	NA
Reagent Dispensing Volume	10-850 µL	10-850 µL	100-1000 µL
Slide Capacity	40	40	60
Reagent Capacity	42	49	60
Bulk Reagent Carboy	7 x 4 L	7 x 4 L	2 x 10 L
Waste Container	20 L	8 L	20 L
Auto Drain	√	NA	NA
Languages enabled	English	English	English, Chinese, German
LIMS - enabled data tracking and management	√	√	√
Auto DAB	√	NA	NA
Ease of slide loading	√	NA	NA
Protocols	Template / Self	Template / Self	Template / Self
Dimensions (D/W/H)	30”/43”/54”	29”/46”/59”	24”/40.5”/18.5”
Weight	400 lb/ 182 kg	400 lb/ 182 kg	130 lb / 59 kg

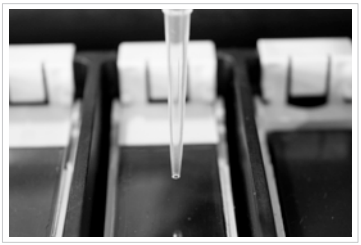
Nucleic Acid Diagnostic (NAD) Platforms

NanoVIP®

eFISHiency System for FISH Automation





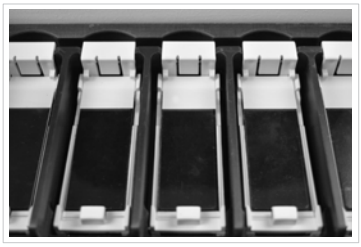


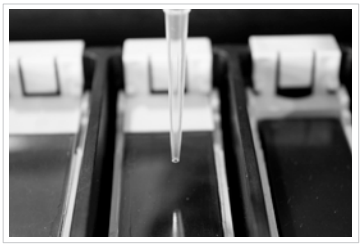
All-in-One - ISH, FISH, miRNA ISH and IHC

- Next generation fully-automated slide staining system
- Economical and affordable
- Flexible Open System Software - create, edit and save protocols for future use
- Simultaneous Optimization of 10 different protocols at the same time
- eXACT™ temperature control on every slide (RT-105 °C)
- Wide reagent dispense volumes: 10 µL to 850 µL
- Liquid level sensor for accurate reagent handling
- BioGenex's proprietary coverslip mechanism
- Intuitive software designed for ease of use and flexibility

Xmatrx®MINI

eFISHiency Workstation





All-in-One - FISH, *in situ* PCR and ISH

- High performance *in situ* PCR and FISH
- Hybridizer with eXACT™ temperature controls
- 10 independent thermal cyclers
- Built-in touch screen display for easy operations
- Facility of on-board wash with effective waste drainage system
- Audio-visual alerts and on screen color-coded error alerts
- User-friendly software with ability to add/delete cycles, store protocols for future use and perform up to 45 PCR cycles

Nucleic Acid *In Situ* Research Platform Specification

Specifications	NanoVIP	Xmatrx® MINI
Automation	Full Automation	Work Station
Run Time (full slide load)	Open System / User defined	Open System / User defined
Temperature Range	Ambient to 105 °C	Ambient to 105 °C
Reagent Dispensing Volume	10-850 uL	NA
Slide Capacity	10	10
Reagent Capacity	24	NA
Bulk Reagent Carboy	6 x 1 L	NA
Waste Container	4 L	2 L
Touch Screen	NA	√
Languages enabled	English, Italian	English, Italian
LIMS - enabled data tracking and management	√	√
Protocols	Template / Self	Template / Self
Dimensions (D/W/H)	20”/30”/20”	19.5”/13”/8”
Weight	106 lb/ 48 kg	30 lb/ 13.6 kg

eFISHiency - FISH Made Easy

Integrated Workflow Solutions for Optimizing Productivity

Xmatrx® ELITE

Microtome to Microscope

- The world's first and only fully automated front-end FISH processing system
- Run up to 40 slides under multiple protocols
- Reduce hands-on tech time from 7.5 hours to 30 minutes

33 Steps Reduced to 3

Load ➡ Click ➡ View

NanoVIP®

eFISHiency System for FISH Automation

- On-board dewaxing, oil seal and final coverslip after DAPI
- Run 10 different protocols at the same time

33 Steps Reduced to 3

Load ➡ Click ➡ View

Xmatrx® MINI

eFISHiency Workstation

- eFISHiency Workstation for manual FISH assay
- Hybridizer with eXACT™ temperature control
- 10 Independently programmable thermal cyclers
- Built-in touch screen display
- Manual coverslip application and removal

Accessories

Oil stamp

Coverslip stand

Suction pen

Other Systems

*i*500 Plus™

LIS Enabled Barcode Label Printer

Integrated Digitized Data Tracking System

- For printing chemical resistant barcode labels
- Compatible with Xmatrx® and *i*6000™
- User-friendly software
- Synchronization of protocol information
- Efficient system
    - Eliminates human error
    - Helps reduce operating cost
    - Fast turn-around

EZ-Retriever® System

Pre-treatment and Antigen Retrieval System

- DeWax, re-hydration and Antigen Retrieval in one step
- Optimized factory protocols
- User-defined protocols
- High throughput 96 slides in under 30 minutes
- Microwavable containers
- Programmable time and temperature controls
- Built-in probe measures solution temperature in real time
- Time saving and uniform heating
- Eco-friendly solutions

Automated Staining Systems

Product Name	Cat. No.
Xmatrx® ELITE	AS4040B
Xmatrx® Infinity	AS4000RX
Xmatrx® ULTRA Dx	AS4030B
Xmatrx® ULTRA Rx	-
NanoVIP®	AS1000
Xmatrx® MINI	AS1010
i6000™ DIAGNOSTICS	AS6030
i6000™ INFINITY	AS6040
i6000™ ELITE Dx	-
i6000™ ELITE Rx	-
NanoMtrx® 300	-
NanoMtrx® 100	-

Immunohistochemistry - Detection Kits

The XViz™ Detection System

All reagents except those for Xmatrx® Infinity are packed in barcode labeled vials especially designed for use on Xmatrx® Automated Staining Systems to ensure accurate identification, proper reagent inventory management and staining up to 200 slides.

Product Name	Pack Size	Cat. No.
XViz™ Detection Kit EZ-AR™ Elegance solutions (1 X 16 mL each of solutions 1, 2) 3 X 16 mL Peroxide Block, 3 X 16 mL Power Block™, 1 X 16 mL Super Enhancer, 1 X 16 mL Polymer HRP, 4 X 11 mL DAB Buffer, 1 X 4 mL DAB chromogen, 3 X 16 mL Hematoxylin	200 slides	QD550-YCDE
XViz™ Detection Kit for Xmatrx® Infinity EZ-AR™ Elegance Solution (1x16 mL each of solutions 1 and 2), 4x16 mL Peroxide Block, 1x15 mL Super enhancer, 5x11 mL DAB buffer, 1x4 mL DAB Chromogen, 1x15 mL Polymer HRP, 4x16 mL Hematoxylin, 1x21 mLPower Block.	200 slides	QD550-YCXE

Super Sensitive™ One-step Polymer-HRP Detection Kit

This kit is designed with the proprietary technology which provides superior sensitivity, specificity and very short protocol. The innovative secondary antibody-polymer conjugate consists of multiple small HRP active sites, which enables clean and intense, nuclear, cytoplasmic, and membrane stains.

Product Name	Contents	Pack Size	Cat. No.
Super Sensitive™ One-step Polymer-HRP Detection Kit/DAB	EZ-AR™ Elegance solutions (1 x 16 mL each of solutions 1, 2,), 3 x 16 mL Peroxide Block, 3 x 16 mL Power Block™, 1 x 16 mL Polymer HRP, 4 x 11 mL DAB Buffer, 1 x 4 mL DAB chromogen, 3 x 16 mL Hematoxylin	200 Slides	QD610-YADE

XViz™ Double Staining Polymer Detection Kits

Product Name	Contents	Pack Size	Cat. No.
XViz™ Double Staining Polymer Detection Kit I/DAB&Fast Red	2 X 10 mL Power Block, 2 X 10 mL Peroxide Block, 4 X 5 mL DAB Buffer 1 X 3 mL Liquid DAB Chromogen, 1 X 7 mL EZ-AR™ Elegance Solutions (1, 2 And 3), 1 X 7 mL Mouse Negative Control, 1 X 7 mL Rabbit Negative Control, 1 X 7 mL Anti Rabbit Poly-Hrp + Anti Mouse Poly-AP, 2 X 10 mL Hematoxylin, 2 X 14 mL Permanent Fast Red A, 2 X 14 mL Permanent Fast Red B	100 Slides	QS200-YADE
XViz™ Double Staining Polymer Detection Kit II/DAB&Fast Red	2 X 10 mL Power Block, 2 X 10 mL Peroxide Block, 4 X 5 mL DAB Buffer 1 X 3 mL Liquid DAB Chromogen, 1 X 7 mL EZ-AR™ Elegance Solutions (1, 2 And 3), 1 X 7 mL Mouse Negative Control, 1 X 7 mL Rabbit Negative Control, 1 X 7 mL Anti Mouse Poly-Hrp + Anti Rabbit Poly-AP, 2 X 10 mL Hematoxylin, 2 X 14 mL Permanent Fast Red A, 2 X 14 mL Permanent Fast Red B	100 Slides	QS400-YADE

Antigen Retrieval Solutions

The EZ-AR™ Elegance Solutions possess unique properties that enable optimal dewaxing, rehydration, and antigen retrieval in formalin-fixed, paraffin-embedded tissue sections. These solutions facilitate the production of highly reproducible and superior quality stains in a considerably short period of time without compromising the morphology and antigenicity of the tissue.

Xmatrx® Elite and Ultra - in Barcode Labeled vials

Product Name	Product Description	Pack Size	Cat. No.
EZ-AR™ 1 Elegance	EZ-AR™ 1 Elegance is a Citra based solution. Works at 100°C	200 slides	HX031-YCD
EZ-AR™ 2 Elegance	EZ-AR™ 2 Elegance is an EDTA based solution. Works at 100°C	200 slides	HX032-YCD
EZ-AR™ 3 Elegance	EZ-AR™ 3 Elegance is a Citra based solution. Works at 100°C	200 slides	HX033-YCD
EZ-AR™ 4 Elegance	EZ-AR™ 4 Elegance is an Tris based solution. Works at 100°C	200 slides	HX034-YCD

Xmatrx® Infinity

Product Name	Product Description	Pack Size	Cat. No.
EZ-AR™ 1 Elegance	EZ-AR™ 1 Elegance is a Citra based solution. Works at 100°C	200 slides	HX031-YCX
EZ-AR™ 2 Elegance	EZ-AR™ 2 Elegance is an EDTA based solution. Works at 100°C	200 slides	HX032-YCX
EZ-AR™ 3 Elegance	EZ-AR™ 3 Elegance is a Citra based solution. Works at 100°C	200 slides	HX033-YCX
EZ-AR™ 4 Elegance	EZ-AR™ 4 Elegance is an Tris based solution. Works at 100°C	200 slides	HX034-YCX

Enzymatic Pre-treatment Solutions

Product Name	Pack Size	Cat. No.
Pepsin 4-Pack: 4 vials of Lyophilized Enzyme Powder, 4 x 6 mL Reconstitution Buffer	200 slides	EK000-10XE
Trypsin 4-Pack: 4 vials of Lyophilized Enzyme Powder, 4 x 6 mL Reconstitution Buffer	200 slides	EK001-10XE
Protease XXIV 4-Pack: 4 vials of Lyophilized Enzyme Powder, 4 x 6 mL Reconstitution Buffer	200 slides	EK002-10XE

In Situ Hybridization Kits and Probes

The XISH Detection Kit is designed for using with fluorescein labeled probes. It enables accurate detection of specific DNA and mRNA sequences in routine paraffin sections/cell smears.

ISH Probes*

Probes are packaged with barcode labeled vials for staining up to 25 slides.

Product Name	Intended Use	Pack Size	Cat. No.
Alu II DNA	Positive control probe for detection of primate DNA sequence repeat	25 slides	PR026-YADE
Beta-Actin	Internal standard for ISH and Northern blot	25 slides	PR1055-YADE
CerviPro HPV 14	Detection of high risk genotypes of human papillomavirus	25 slides	PR251-YADE
CerviPro HPV Type 16/18	Detection of HPV types 16 and 18	25 slides	PR250-YADE
Epstein Barr Virus Early RNA (EBER)	Detection of latent EBV infection	25 slides	PR205-YADE
Kappa	Detection of Kappa light chain mRNA	25 slides	PR214-YADE
Lambda	Detection of Lambda light chain mRNA	25 slides	PR215-YADE
Oligo dT	Assessment of mRNA preservation	25 slides	PR217-YADE
Retinoblastoma	Detection of Retinoblastoma mRNA	25 slides	PR225-YADE

*Research use only

One Step ISH Detection Kit

Product Name	Probe Type	Pack Size	Cat. No.
XISH™ One Step Polymer-HRP ISH Detection System 1 x10 mL Power Block, 1 x 10 mL Peroxide Block, 4 x 5 mL DAB Buffer, 1 x 5 mL Liquid DAB Chromogen, 1 x 5 mL One step Poly-HRP Reagent; 1 x 10 mL Hematoxylin; 1 x 5 mL Proteinase K; 1 x 5 mL Nucleic Acid Retrieval Solution; 2 x 10 mL Wash Solution A; 2 x 10 mL Wash Solution B; 2 x 10 mL Wash Soution E; 2 x 10 mL Wash Solution F; 1 x 5 mL Anti-Flourescein Antibody	Fluorescein Labeled	100 slides	DF400-YADE

Empty Reagent Vials

Product Name	Pack Size	Cat. No.
User defined Empty barcode labeled vials- Two step IHC	Each	XT077-AX0601 to XT077-AX0800
User defined Empty barcode labeled vials- One step IHC	Each	XT077-AX0801 to XT077-AX0999
User defined Empty barcode labeled vials- ISH Probes	Each	XT079-PR0050 to XT079-PR0099

Consumable Kit

Product Name	Pack Size	Cat. No.
ISH Consumable Kit-Xmatrx® 2 x 52 nos 25 x 25 mm Double Barrier Slides, 1 x 900 Nos of 25 x 25 mm Coverslips, 2 x 192 Large Pipette Tips (1 mL), 1 x 960 Nos of Pipette Tips (200 µL)	100 slides	XT144-YAD
Xflex Ultra Consumable Kit 3 x 72 Nos of 25 X 40 mm Double Barrier Slides, 2 x 500 Nos of 25 X 40 CoverSlips, 1 X 960 Nos of Pipette Tips (200 µL), 2 x 192 Large Pipette Tips (1 mL)	200 slides	XT148-YCDE

Xmatrx® Consumables

Product Name	Pack Size	Cat. No.
Barrier Slides, 18x18 mm, 2-zone, Xmatrx® ELITE & Infinity	1400 Slides/Case	XT114-CL
Barrier Slides, 18x18 mm, 2-zone, Xmatrx® ELITE & Infinity	70 Slides/Box	XT114-SL
Barrier Slides, 18x18 mm, Xmatrx® ELITE & Infinity	1400 Slides/Case	XT128-CL
Barrier Slides, 18x18 mm, Xmatrx® ELITE & Infinity	70 Slides/Box	XT128-SL
Barrier Slides, 25X25 mm, Xmatrx® ELITE & Infinity	1400 Slides/Case	XT108-CL
Barrier Slides, 25X25 mm, Xmatrx® ELITE & Infinity	70 Slides/Box	XT108-SL
Barrier Slides, 25X40 mm, Xmatrx® ELITE ISH & Infinity	1400 Slides/Case	XT134-CL
Barrier Slides, 25X40 mm, Xmatrx® ELITE ISH & Infinity	70 Slides/Box	XT134-SL
Coverslips, 18x18 mm, Xmatrx® ELITE & Infinity	1750 Coverslips/Case	XT121-XBK
Coverslips, 18x18 mm, Xmatrx® ELITE & Infinity	175 Coverslips/Box	XT121-YBX
Coverslips, 25x25 mm, Xmatrx® Infinity & ELITE ISH	90 Coverslips/Box	XT122-90X
Coverslips, 25x25 mm, Xmatrx® Infinity & ELITE ISH	900 Coverslips/Case	XT122-YQK
Coverslips, 25x40 mm, Xmatrx® ELITE & Infinity	50 Coverslips/Box	XT118-50X
Coverslips, 25x40 mm, Xmatrx® ELITE & Infinity	500 Coverslips/Box	XT118-YRK
Reagent Vials, Brown, 20 mL, Xmatrx® Infinity	24/Pack	XT101-24X
Reagent Vials, Translucent, 20 mL, Xmatrx® Infinity	24/Pack	XT026-V24
Reagent vial - no lid, brown/2 mL vial holder for Xmatrx® ELITE	24/pack	XT126-24V
Pipette Tips, 1 mL, Xmatrx® ELITE & Infinity	960 Tips/Case	XT104-05X

Product Name	Pack Size	Cat. No.
Pipette Tips, 1 mL, Xmatrx® ELITE & Infinity	192 Tips/Box	XT105-01X
Pipette Tips, 200 µL, Xmatrx® Infinity & ELITE	960 Tips/Box	XT146-01X
Pipette Tips, 200 µL, Xmatrx® Infinity & ELITE	4800 Tips/Case	XT145-05X
Reagent Vial Insert, 2 mL	24/Pack	XT149-V24

Ancillary Reagents

DeWax Solutions†

BioGenex X-DeWax™ Solution is a "one-step" product that simultaneously enables the removal of paraffin and allows rehydration of the tissue with a single reagent. In the past, formalin-fixed, paraffin-embedded tissue sections were traditionally deparaffinized with highly toxic, noxious chemicals (i.e. xylene, equivalents). BioGenex, a pioneer in the Immunohistochemistry technology, offers a xylene-free product that removes the paraffin from mounted tissue slides easily and rapidly.

Product Name	Pack Size	Cat. No.
X-DeWax™ Solution (Ready-to-Use)	1000 mL	HX015-XAK†
X-DeWax™ Solution (Concentrated)	1000 mL	HX016-XAK†
X-DeWax™ Solution (Concentrated)	1 Gallon	HX016-XEK†

XMount™

Product Name	Pack Size	Cat. No.
XMount™ for Xmatrx® Elite (barcode)	200 slides	HX035-YCD
XMount™ for Xmatrx® Infinity	200 slides	HX035-10X

Wash Buffers

XWash™ Buffer provides optimal staining with minimal background.

Product Name	Pack Size	Cat. No.
SuperSensitive Wash Buffer	500 mL	HK583-5K
X-Wash Buffer, 20X for Xmatrx®	500 mL	HX020-YIK
SS Wash Solution	500 mL	HK755-5K

FISH Application

Product Name	Cat. No.
Xmatrx® FISH Software	4812-00089

Note: Unless specified otherwise, all products listed in this section are for Laboratory Use Only.
† U.S. Patent No. 6,632,598; U.S. Patent No. 7, 070, 951; Japanese Patent No. 3532571; European Patent No. 0698118B1.

Detection Systems

Our all-inclusive, Super Sensitive™ Detection Systems contain all the reagents required for easy, fast, and exceptional staining. Each kit contains enough reagents to stain approximately 200 slides at 100 µL per slide. The following kit configurations are available to fit the laboratory's needs for any staining requirement. Reagents are offered in barcoded vials designed for use on the *i*6000™ Staining Systems.

Product Name	Pack Size	Cat. No.
Super Sensitive™ One-step Polymer-HRP Detection Kit/DAB	200 slides	QD610-YAXE
Super Sensitive™ Polymer HRP Detection System/DAB	200 slides	QD410-YAXE
Avidin/Biotin Blocking Kit RTU	200 slides	HK102-20XE
Avidin/Biotin Blocking Kit RTU	100 slides	HK102-10KE

OptiMiser Reagent Vials and Accessories (User Defined)

The OptiMiser reagent vials (U.S. & Foreign Equivalent Patents Pending) are available as a 20 mL disposable barcoded pack for use on the *i*6000™ staining systems.

Product Name	Pack Size	Cat. No.
OptiMiser Reagent Vials, Labeled (20 mL) (Empty Vials supplied with 100 corresponding slide barcode labels)	1 each	XT026-601 to XT026-899 XT026-601P to XT026-750P
OptiMiser Reagent Vials, Unlabeled (20 mL) White	Pack of 24	XT026-V24
OptiMiser Reagent Vials, Unlabeled (20 mL) Brown	Pack of 24	XT101-24X
OptiMiser Universal Vial Holders	Pack of 24	XT027-H24
OptiMiser Vial Caps	Pack of 24	XT022-CP
Reagent Empty Vial Labeled for User Probe	1 each	XT026-PR601 to XT026-PR615

Note: Unlabeled Vials - for open system only

Barrier Slides, PAP Pen, and Barcode Labels

OptiPlus™ Positively-charged Barrier Slides (U.S. & Foreign Equivalent Patents Pending) contain hydrophobic barriers that allow the quantity of reagent per slide to be tailored to the size of the specimen. These slides come in three configurations to accommodate different tissue sizes or multiple tissues per slide; A single full-size test area of 25 mm x 40 mm, a single 2/3-size test area of 25 mm x 30 mm, and three 1/3-size test areas per slide, each measuring 25 mm x 15 mm. The permanent hydrophobic barriers are compatible with dewaxing solutions and other reagents. The slides are suitable for use with frozen tissue sections, formalin-fixed paraffin sections, and cytology preparations.

Product Name	Pack Size	Cat. No.
OptiPlus™ Positively-charged Barrier Slides (full test area)	1 box (70 slides)	XT134-SL
	1 case (20 boxes)	XT134-CL
OptiPlus™ Positively-charged Barrier Slides (2/3 test area)	1 box (70 slides)	XT013-SL
	1 case (20 boxes)	XT013-CL
OptiPlus™ Positively-charged Barrier Slides (3 x 1/3 test area)	1 box (70 slides)	XT014-SL
	1 case (20 boxes)	XT014-CL
PAP Pen (for 500 - 1000 slides)	1 each	XT001-PP
Slide Barcode Labels	100/sheet	AM6010 to AM7990 AR6010 to AR6600

Pipette Tips

Each pipette tip is carefully inspected to ensure optimal and accurate performance.

Product Name	Pack Size	Cat. No.
Pipette Tips for *i*6000™ (1.0 mL)	1 box (192 tips)	XT105-01X
Pipette Tips for *i*6000™ (1.0 mL)	5 boxes (960 tips)	XT104-05X

Ancillary Reagents

EZ-DeWax™ Solutions[1]

Tissue specimens are usually fixed and embedded in paraffin, sectioned on a microtome, and then attached to slides. Before immunostaining, the sections are traditionally deparaffinized with highly toxic, noxious chemicals (xylene and alcohols or equivalents). BioGenex offers a revolutionary product that simply, easily and rapidly removes the paraffin from mounted tissue slides. Use of non-xylene based BioGenex EZ-DeWax™ Solution permits a two-step application of a single reagent that completely removes the paraffin, rendering the tissue's antigenic sites accessible to the antibodies, chromogens and other aqueous solutions. The deparaffinization time is reduced from 45 minutes of manual processing to less than 15 minutes of automated dewaxing on the BioGenex *i*6000™ Automated Staining System using the EZ-DeWax™ Solution. The solution simultaneously removes paraffin and rehydrates the tissue.

Product Name	Pack Size	Cat. No.
EZ-DeWax™ Solution (Concentrated)[1] (Requires 500 mL of histologic grade ethanol for reconstitution)	500 mL	HK584-5K
EZ-DeWax™ Solution (RTU)[1]	1000 mL	HK585-5K

[1] US Patent No. 6,632,598; Japanese Patent No. 3532571; European Patent No. 0698118B1.

Enzymes for Pre-treatment

Some tissues require the use of enzymatic pre-treatment before staining to achieve standardized results depending on the antibodies and their different incubation and pre-treatment requirements.

Product Name	Pack Size	Cat. No.
Pepsin 4-Pack 4 vials of Lyophilized Enzyme Powder, Reconstitution Buffer 4 x 5 mL	200 slides	EK000-10KE
Trypsin 4-Pack 4 vials of Lyophilized Enzyme Powder, Reconstitution Buffer 4 x 5 mL	200 slides	EK001-10KE
Protease XXIV 4-Pack 4 vials of Lyophilized Enzyme Powder, Reconstitution Buffer 4 x 5 mL	200 slides	EK002-10KE
Diastase (Alpha-Amylase Kit) 4 vials of alpha-amylase, 4 vials of alpha-amylase diluent	200 slides	EK004-5KE

Wash Buffers

Super Sensitive™ Wash Buffers are used to ensure optimal staining with even spreading of antibodies and other reagents to avoid inconsistent results.

Product Name	Pack Size	Cat. No.
Super Sensitive™ Wash Buffer, 20X concentrated	500 mL	HK583-5K
X-Wash Buffer, 20X for Xmatrx®	500 mL	HX020-YIK
SS Wash Solution	500 mL	HK755-5K

EZ-AR™ Solutions

Product Name	Product Description	Pack Size	Cat. No.
EZ-AR™ 1 RTU[1]	EZ-AR™ 1 is a Citra based solution. Works at 107˚C	1L	HK521-XAK
EZ-AR™ 2 RTU[1]	EZ-AR™ 2 is a EDTA based solution. Works at 107˚C	1L	HK522-XAK
EZ-AR™ 2 RTU[1]	EZ-AR™ 2 is a EDTA based solution. Works at 107˚C	2GL	HK522-XIKE
EZ-AR™ 3 Conc.[1] (10X)	EZ-AR™ 3 is a Citra based solution. Works at 107˚C	500 mL	HK543-YOK
EZ-AR™ 4 Conc.[1] (10X)	EZ-AR™ 4 is a Tris based solution. Works at 107˚C	500 mL	HK544-YOK
EZ-AR™ Common, Conc.[1] (5X)	DeWax solution. Use in combination with other EZ-AR™ solutions	1 L	HK545-XOK

i500 Plus™

Product Name	Cat. No.
*i*500 Plus™ LIS Enabled Barcode Label Printer	BLS500

Instrument Accessories

Product Name	Pack Size	Cat. No.
Resin Ribbon	1 Roll	XT034-XEX
Labels Roll	1 Roll	XT035-XBX

[1] U.S. Patent Numbers 6,451,551 and 5,578,452 (as well as foreign equivalents)

Tissue Pre-treatment & Antigen Retrieval

De-Waxing Solutions

One-Step DeWaxing and Rehydration Reagent

BioGenex deparaffinization solutions are “one-step” products that simultaneously enables the removal of paraffin and allows rehydration of the tissue with a single reagent. In the past, formalin-fixed, paraffin-embedded tissue sections were traditionally deparaffinized with highly toxic, noxious chemicals (i.e. xylene, equivalents). BioGenex, a pioneer in Immunohistochemistry technology, offers xylene-free products that remove paraffin from mounted tissue slides easily and rapidly.

1. EZ-DeWaxSol. – For all BioGenex manual methods.

2. X-Dewax Sol. – Optimized for Xmatrx® automation.

Features & Benefits

- Effectively removes paraffin and allows rehydration of the tissue in one step.
- Reduces deparaffinization time from 45 minutes to 10 minutes.
- Eliminates use of toxic solvents (xylene) and minimizes hazardous waste.
- Ready-to-Use (RTU) or 2x solutions (to be diluted 1:1 with ethanol) are available.

3. EZ-AR Common Sol. – Microwave facilitated deparaffinization.

Features & Benefits

- Conveniently perform deparaffinization and Antigen Retrieval in the same slide tank using microwave heating.
- Quick deparaffinization & rehydration in one step (10 minutes @ 70 ºC default protocol).
- Reduces the use of alcohol in preparing tissue sections for IHC, ISH, H & E, FISH and Special Stains.
- Eliminates use of toxic solvents (xylene) and minimizes hazardous waste.
- Optimized for use in EZ-Retriever® microwave with BioGenex EZ-AR 1-4 solutions.

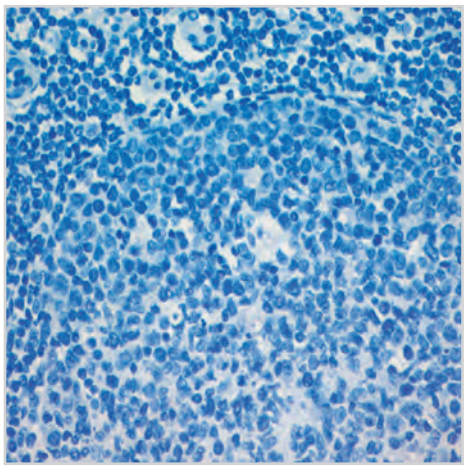
Product	1000 mL(RTU)	1000 mL/500 mL(2x)	1 Gallon(2x)
X-DeWax (Xmatrx®)	HX015-XAK	HX016-XAK (1000 mL)	HX016-XEK
EZ-DeWax (Manual/i6000™)	HK585-5k	HK584-5k (500 mL)	NA
EZ-AR Common Sol 1000 mL (5x)	HK545-X0K	-	-

Antigen Retrieval Method

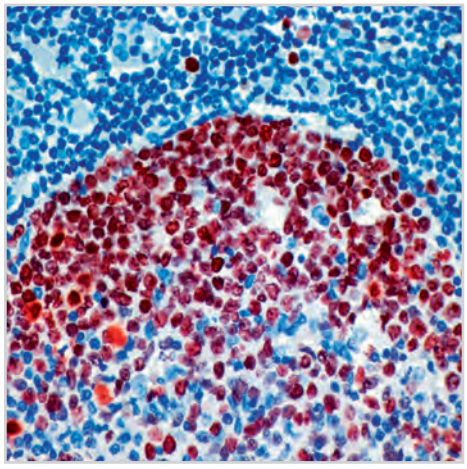
BioGenex is the inventor of Antigen Retrieval enabling technology. Antigen Retrieval is an effective way of unmasking antigenic epitopes on the surface of formalin-fixed, paraffin-embedded tissue sections using microwave heating. Covered by exclusive patents issued to BioGenex, this method has been routinely practiced in laboratories throughout the world. The Antigen Retrieval technique breaks the formalin induced cross-linking bonds between epitopes and unrelated proteins, there by allowing better penetration of antibody and accessibility of epitopes.

Advantages of the method:

- Enhanced exposure of antigenic epitopes on the surface of the tissue section
- Reduced time for primary antibodies incubation
- Consistent and reliable staining quality
- Eliminates false negative staining results in FFPE tissue sections
- Ease-of-use



Tonsil tissue stained with anti-Ki-67 antibody
using AEC chromogen without antigen retrieval



Tonsil tissue stained with anti-Ki-67 antibody
using AEC chromogen with antigen retrieval

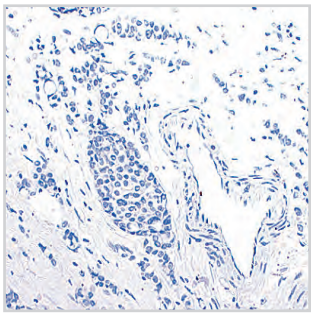
Different antibodies require different conditions for Antigen Retrieval. BioGenex offers several types of Antigen Retrieval Solutions.

1. Antigen-Retrieval(AR) Solutions – For Manual Use & i6000™

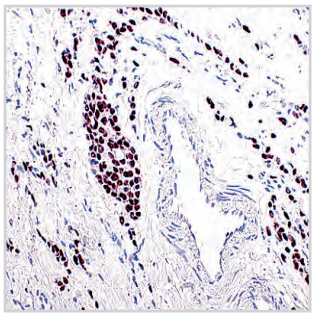
Product	Method	Features & Recommended Use
Citra	Microwave,95-100 °C	pH~6, excellent for most BioGenex Antibodies*
Citra Plus	Microwave, 95-100 °C	Enhanced formulation pH~6, for antibodies such as Estrogen Receptor (clone ER88), HSP27 (G3.1) and CDX-2 (CDX2-88)*
AR-10	Microwave, 95-100 °C	Tris-Based, high pH-10, for antibodies such as Caldesmon (clone h-CD), CD3 (PS1), c-myc (9E10)& GLEPP1 (5C11)*
H&E	Microwave or Room Temp. 25-100 °C	Best for burnt, overfixed or dried FFPE tissues, over-DeCal (bone marrow biopsies) and fragile/ over processed specimens (e.g. needle biopsies). Can be used at room temp. for some frozen tissue sections and tissues with freezing artifacts
DeCal	Room Temp.20-25 °C	For acid-decalcified bone marrow & formalin-fixed tissues embedded in paraffin or celloidin

* See datasheets for BioGenex recommended Antigen Retrieval for each specific antibody.

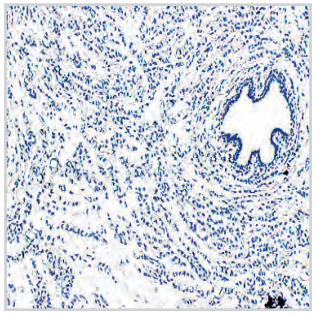
Product	100 mL(10x)	500 mL(10x)	250 mL(RTU)	1000 mL(RTU)
AR Citra Sol. pH-6.0	HK086-5K	HK086-9K	HK087-5K	HK087-20K
AR Citra Plus Sol. pH-6.2	HK080-5K	HK080-9K	HK081-5K	HK081-20K
AR-10 Sol. (Tris) pH-10	HK057-5K	NA	HK058-5K	HK058-20K
H&E Retrieval	HK169-5K	NA	NA	NA
DeCal Retrieval Sol.	NA	NA	HK089-5K	NA



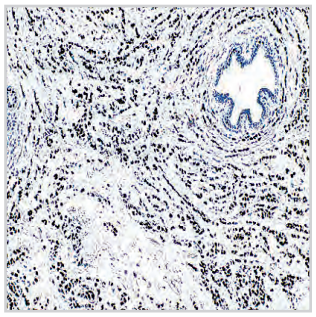
Breast Carcinoma tissue stained with Anti-Progesterone Receptor [PR88] MAb, using AEC chromogen without Antigen Retrieval.



Breast Carcinoma tissue stained with Anti-Progesterone Receptor [PR88] MAb, using AEC chromogen with Antigen Retrieval using Citra.



Breast Carcinoma tissue stained with Anti-Estrogen Receptor [ER88] MAb, using DAB chromogen without Antigen Retrieval.



Breast Carcinoma tissue stained with Anti-Estrogen Receptor [ER88] MAb, using DAB chromogen with Antigen Retrieval using Citra Plus.

2. Enhanced Antigen-Retrieval (EZ-AR) Solutions – For Manual & i6000™ Use

Features & Benefits:

- Unique superheating properties - Increases the availability of antigenic epitopes in tissues
- Short and standardized protocols for all BioGenex antibodies - Eliminates guesswork in optimizing protocols
- Fast uniform heating and cooling of solutions - Reduces tissue pretreatment time
- Non-hazardous, non-flammable, and odorless - Safe and Eco-friendly

Product	Method	Features & Recommended Use
EZ-AR 1	EZ-Retriever® or Microwave, 107 °C	Citra based, pH~6, excellent for most BioGenex Antibodies*
EZ-AR 2	EZ-Retriever® or Microwave, 107 °C	EDTA based, pH~8.5, for antibodies such as Ki67 (EP5), CD5 (EP2952) and NGF Receptor (EP1039Y)*
EZ-AR 3	EZ-Retriever® or Microwave, 95-100 °C	Citra based, pH~6, for antibodies such as Estrogen Receptor (clone ER88), HSP27 (G3.1) and CDX-2 (CDX2-88)*
EZ-AR 4	EZ-Retriever® or Microwave, 95-100 °C	Tris based, pH~10, for antibodies such as Caldesmon (clone h-CD), CD3 (PS1), c-myc (9E10) & GLEPP1 (5C11)*

* See datasheets for BioGenex recommended Antigen Retrieval for each specific antibody.

Product	1 L (RTU)	2 GL (RTU)	500 mL (10x)
EZ-AR 1 Sol (Citra)	HK521-XAK	NA	NA
EZ-AR 2 Sol (EDTA)	HK522-XAK	HK522-XIKE	NA
EZ-AR 3 Sol (Citra)	NA	NA	HK543-YOK
EZ-AR 4 Sol (Tris)	NA	NA	HK544-YOK

3. EZ-AR Elegance Antigen Retrieval Solutions – Superheating boil-free solutions

Features & Benefits:

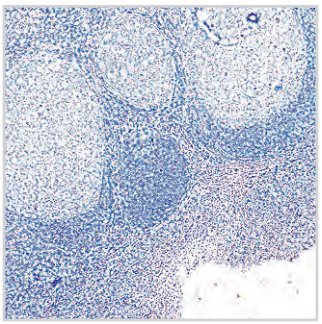
- Optimized for Xmatrx® with standardized protocols for all BioGenex antibodies
- Reaches 107 °C without boiling - Minimizes evaporation & preserves morphology
- Non-hazardous, non-flammable, and odorless - Safe and Eco-friendly

Product	Method	Features & Recommended Use
EZ-AR 1 Elegance	Xmatrx® Automation Works at 100-105 °C	Citra based, pH~6, excellent for most BioGenex Antibodies*
EZ-AR 2 Elegance	Xmatrx® Automation Works at 100-105 °C	EDTA based, pH~8.5, for antibodies such as Ki67 (EP5), P27 (Y236) and P53 Protein (DO7)*
EZ-AR 3 Elegance	Xmatrx® Automation Works at 95-100 °C	Citra based, pH~6, for antibodies such as Estrogen Receptor (clone ER88), HSP27 (G3.1) and CDX-2 (CDX2-88)*
EZ-AR 4 Elegance	Xmatrx® Automation Works at 95-100 °C	Tris based, pH~10, for antibodies such as Caldesmon (clone h-CD), CD3 (PS1), c-myc (9E10) & GLEPP1 (5C11)*

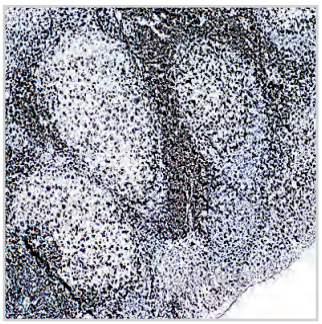
* See datasheets for BioGenex recommended Antigen Retrieval for each specific antibody.

Product	Xmatrx® Elite/Ultra# 200 Slides**(RTU)	Xmatrx® Infinity## 200 Slides**(RTU)	Manual/Open Sys.^ 1000 mL(RTU)
EZ-AR 1 Elegance (Citra)	HX031-YCD	HX031-YCX	HK546-XAK
EZ-AR 2 Elegance (EDTA)	HX032-YCD	HX032-YCX	HK547-XAK
EZ-AR 3 Elegance (Citra)	HX033-YCD	HX033-YCX	NA
EZ-AR 4 Elegance (Tris)	HX034-YCD	HX034-YCX	NA

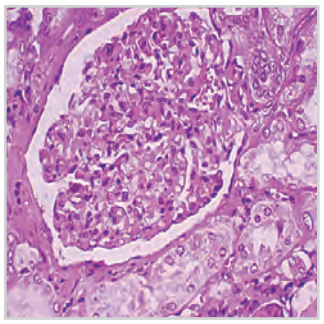
** 80 µL/test for Xmatrx® Elite/Ultra, 70 µL/test for Xmatrx® Infinity
^ Reagent vials for Xmatrx® Infinity need to be purchased separately



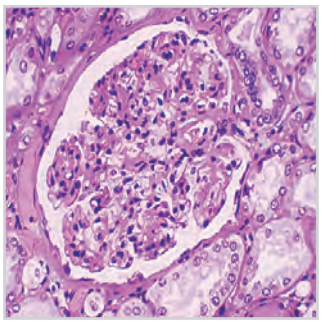
Tonsil tissue stained with anti-CD3 MAb using DAB chromogen without Antigen Retrieval using AR-10†.



Tonsil tissue stained with anti-CD3 MAb using DAB chromogen with Antigen Retrieval using AR-10†.



Burnt kidney tissue stained after standard pre-treatment.

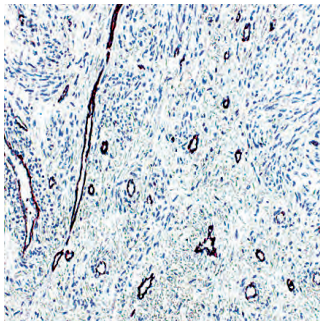


Nuclear data restored by microwave heating in H&E Solution.

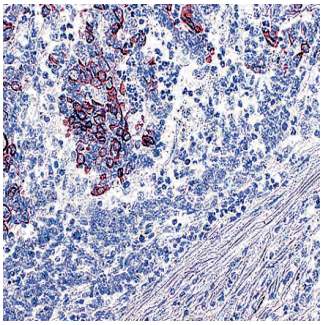
Enzymes for Tissue Digestion

Some tissues require the use of enzymatic pre-treatment before staining to achieve standardized results depending on the antibodies and their different incubation and pre-treatment requirements.Each kit contains three or four vials of lyophilized enzyme powder and 15 mL of reconstitution buffer, enabling you to make fresh enzyme solutions as needed.

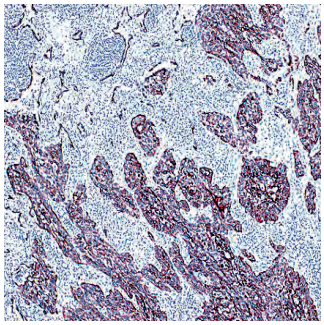
1. The Trypsin and Pepsin kits contain well-established enzymes suitable for routine pre-treatment at 37 °C.
2. Protease XXIV kits contain a universal digestive agent that allows for fast and effective pre-treatment at room temperature.
3. The diastase (Alpha-amylase) catalyzes breakdown of starch. Diastase is often used prior to periodic acid-Schiff (PAS) staining (See Special Stains section) and is useful as an aid in the evaluation of glycogen storage disease.
4. Proteinase K in a Ready-to-Use (RTU), RNase-free solution.



Leiomyoma tissue stained with Factor VIII MAb using AEC chromogen following Pepsin Pre-treatment.



Colonic adeno carcinoma stained with Anti-Cytokeratin 20 MAb following Protease Pre-treatment.



Squamous Carcinoma tissue stained with Anti-Cytokeratin (High Molecular Weight) MAb using AEC chromogen following Trypsin Pre-treatment.

Product	Manual### 150 Slides/3 pack	i6000™## 200 Slides/4 pack	Xmatrx®# 200 Slides/4 pack
Diastase (Alpha-Amylase)	NA	EK004-5KE	NA
Pepsin	EK000-5KE	EK000-10KE	EK000-10XE
Protease XXIV	EK002-5KE	EK002-10KE	EK002-10XE
Trypsin	EK001-5KE	EK001-10KE	EK001-10XE
Proteinase K	HK878-5KE (50 Tests only)	NA	NA

In barcode labeled Xmatrx® Elite/Ultra vial
In i6000™/Xmatrx® Infinity Barcode tagged vial
In drop bottles

NordicWare® Microwave Tender Cooker

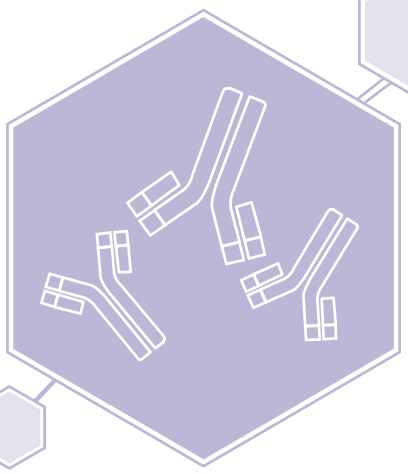
Placing the NordicWare® Microwave Tender Cooker[a] within a microwave is an effective method for enhancing staining with the Antigen Retrieval technique. The heat produced under enhanced pressure can reduce the build up of gas bubbles on the surface of tissues. This improves the intensity of staining, accompanied by preservation of tissue and cell morphology. This pressure cooker is also optimized for use with various BioGenex Antigen Retrieval solutions.

Product Name	Pack Size	Cat. No.
NordicWare® Microwave Tender Cooker	1 Unit	NW001-PC

For Laboratory Use only

[a] NordicWare® is a registered trademark of NordicWare Corp.

Note: The reagents in this section are for Laboratory use only



Primary Antibodies

Primary Antibodies

BioGenex antibodies are optimized to provide maximum signal with minimum background when used for immunohistochemical staining.

Format

Ready-to-Use antibodies are fully optimized for use with BioGenex detection systems without the need for further dilution or titration. Ready-to-Use, Super Sensitive™ antibodies are fully quality controlled. These antibodies are recommended for use with all Super Sensitive™ Detection Systems to provide optimum staining. The ready-to-use antibody formats are indicated by catalog numbers prefixed with AC (Antibody Cocktails), AM (Mouse Monoclonal Antibodies), AN (Rabbit Monoclonal Antibodies), AY & AX (Monoclonal Antibodies for Xmatrx®), AW (Polyclonal Antibodies for Xmatrx®) and AR (Polyclonal Antibodies).

Concentrated antibodies are provided with recommended dilutions for optimal use with BioGenex detection systems, allowing rapid titration and testing. These provide a more economical alternative for laboratories doing high volume immunostaining. The concentrated antibody formats are indicated by catalog numbers prefixed with MU (Mouse Monoclonal Antibodies), NU (Rabbit Monoclonal Antibodies) and PU (Polyclonal Antibodies).

All BioGenex concentrated antibodies are thoroughly tested for immunostaining applications and come with recommended dilutions for use with BioGenex detection systems. For specific information on individual antibody titers, please call BioGenex Technical Support at 1(800)421-4149 or write to: support@biogenex.com.

Pack Size

Unless otherwise specified, the following table lists the pack size for the available formats of antibodies:

Description	Pack Size	Order information in Cat. No.
Ready-to-Use (Manual)	6 ml	-5M and -5R
Ready-to-Use (*i*6000™)	10 ml	-10M and 10R
Ready-to-Use (Xmatrx® Elite/Ultra) barcode labeled	16 ml (200 tests) and 5 ml (50 tests)	-YCD and 50D
Concentrated	1 ml and 0.5 ml	-UC and UP or 5UC and 5UP

Tissue Type

Unless otherwise noted, all primary antibodies are optimized for use on routine formalin-fixed paraffin-embedded human tissue.

Optimization

All BioGenex primary antibodies are quality controlled and tested to provide optimum immunohistochemical staining when used with the appropriate BioGenex detection system. The correct optimization of antibody and detection system minimizes the potential for false negative or false positive staining.

Recommended Pre-treatment

The recommended pre-treatment for each antibody is provided under each description of the antibody.

BioGenex offers EZ-Retriever® System for Dewaxing, Rehydration and Antigen Retrieval, that streamlines and simplifies tissue pre-treatment. For more details on the system please refer to Automated Systems section.

We recommend that you refer to the datasheet (i.e. package insert) provided with the antibodies for up-to-date information on the pre-treatment conditions or please contact BioGenex Technical Support at 1(800)421-4149 or write to: support@biogenex.com.

Positive Tissue Control Slides And Barrier Slides

BioGenex provides positive tissue control for use with the antibodies. The appropriate catalog number for the positive control slides with and without barrier are provided. For further details, refer to the Tissue Control section.

Antibody Look-Up Table

The table titled as “Antibody Look-Up Table” in the beginning of this section provides comprehensive information on all BioGenex primary antibodies along with positive controls.

IVD Products

Unless specified otherwise, all Primary Antibodies listed in this Section are for *In Vitro* Diagnostic Use.

Antibody Look-up Table

Antibody	Clone (Species)*	Localization	Positive Control	Regulatory Classification	SKU Family
ABCC3	Polyclonal(R)	Mem	Colon Ca	IVD	AR800
Aberrant Endothelial Cell	4A11(M)	Cyt	Tonsil	IVD	AM382
ACTH	AH26(M)	Cyt	Pituitary	IVD	AM487
Actin, Muscle-Specific	HHF35(M)	Cyt	Muscle	IVD	AM090
Actin, Smooth Muscle	1A4(M)	Cyt	Stomach	IVD	AM128
Adenovirus	A62020069P(M)	Nuc	Bion Slide	IVD	AM059E
ALK/p80	SP8(R)	Nuc/Cyt	Adeno Ca	IVD	AN770
Alpha-1-Antichymotrypsin	a1A88(M)	Cyt	Liver Ca	IVD	AM388
Alpha-1-Antitrypsin	Polyclonal(R)	Cyt	Hepatocellular Ca	IVD	AR015
Alpha-Actinin	JLN20(M)	Cyt	Muscle	IVD	AM097
Alpha-Fetoprotein (AFP)	C3(M)	Cyt	Hepatocellular Ca	IVD	AM008
Alpha-Tubulin	DM-1A(M)	Cyt	Lung	IVD	AM121
Anaplastic Lymphoma Kinase (ALK)	SP144(R)	Mem/Cyt	Anaplastic Lymphoma	IVD	AN874
Androgen Receptor	F39.4.1(M)	Nuclear& cytoplasm	Prostate Hyper	IVD	AM256E
Annexin A1	ANXA1/1671(M)	Cyt/Mem	Spleen	IVD	AM982
B Cell	MB2(M)	Cyt	Tonsil	IVD	AM158
B Lymphocyte Antigen 36, BLA-36	A27-42(M)	Mem	Hodgkin	IVD	AM231
Basic Fibroblast Growth Factor (bFGF)	bFGF88(M)	Cyt	Adeno Ca	IVD	AM359
Bax Protein	Polyclonal(R)	Cyt/Mem	Breast Ca	IVD	AR347
BCA-225	Cu-18(M)	Cyt	Breast Cancer	IVD	AM968
BCL-2	EP36(R)	Cyt	Breast Ca	IVD	AN723
BCL-2 Oncoprotein	bcl-2/100(M)	Cyt	Tonsil	IVD	AM287
BCL-2α	SP66(R)	Mem	Tonsil	IVD	AN758
BCL-6	LN22(M)	Nuc	Tonsil	IVD	AM708
BCL-X	EP94(R)	Membrane	Tonsil	IVD	AN819
BCR-ABL	7C6(M)	Nuc	Liver Ca	IVD	AM903E
Beta-Catenin	EP35(R)	Nuc/Cyt	Breast	IVD	AN778
Beta-Tubulin	DM-1B(M)	Cyt	Lung	IVD	AM122
Beta-Tubulin II	JDR3B8(M)	Cyt	Colon	IVD	AM176
Beta-Tubulin III	SDL3D10(M)	Cyt	Heart	IVD	AM177
Beta-Tubulin IV	ONS1A6(M)	Cyt	Lung	IVD	AM178
Blood Group Antigen Lewis A	7LE(M)	Cyt/Mem	Stomach	IVD	AM303
Blood Group Antigen Lewis B	2-25LE(M)	Cyt/Mem	Stomach	IVD	AM304
BOB-1	SP92(R)	Mem	Tonsil	IVD	AM957E
BRCA1 Protein	Polyclonal(R)	Mem	Breast Ca	IVD	AR345
BrdU	IIB5(M)	Nuc	Colon	RUO	AM984
Breast Cancer Antigen (BCA) 225	CU18(M)	Cyt	Breast Ca	IVD	AM135
CA 19-9	C241:5:1:4(M)	Cyt	Colon	IVD	AM424
CA 125	Ov185:1(M)	Mem/Cyt	Ovary Ca	IVD	AM429
Calcitonin	SP17(R)	Cyt	Thyroid	IVD	AN926
Caldesmon	EP19(R)	Cyt	Uterus	IVD	AN774

Please consult the data sheet for pre-treatment and protocol information. Unless specified otherwise, all primary antibodies listed in this table are for FFPE tissue specimens

* M: Mouse; R:Rabbit

Antibody	Clone (Species)*	Localization	Positive Control	Regulatory Classification	SKU Family
Caldesmon HMW, Smooth muscle	h-CD(M)	Cyt	Leiomyoma	IVD	AM332
Calponin	CALP(M)	Cyt	Breast Ca	IVD	AM333
Calponin-1	EP63(R)	Cyt	Pleomorphic Adenoma	IVD	AN821
Calretinin	Polyclonal(R)	Cyt	Cerebrum, Cortex	IVD	AM583
Calretinin	SP13(R)	Cyt/Mem	Mesothelioma	IVD	AN747
Calretinin	2E7(M)	Cyt	Cerebellum	IVD	AR413
Carcinoembryonic Antigen (CEA)	B01-94-11M-P(M)	Cyt	Colon Ca	IVD	AM009
Carcinoembryonic Antigen (CEA)	Polyclonal(R)	Cyt	Colon Ca	IVD	AM365
Carcinoembryonic Antigen (CEA)	CEA88(M)	Cyt	Colon Ca	IVD	AR009
Catenin Delta 1 (P120)	Polyclonal (R)	Cyt/Mem	Breast Ca	IVD	AR706
Cathepsin D	C15(M)	Cyt	Breast Ca	IVD	AM467
Cathepsin D	CTSD/3082(M)	Cyt	Lung	IVD	AM961
CD1a	O10(M)	Mem/Cyt	Lymph Node	IVD	AM490
CD2	AB75(M)	Mem	Lymphoma	IVD	AM438
CD3 (T cell)	UCHT1(M)	Mem(Frozen)	Frozen Tonsil	IVD	AM258
CD3 (T Cell)	PS1(M)	Mem	Tonsil	IVD	AM322
CD3 (T Cell)	EP41(R)	Mem	Lymphoma	IVD	AN846
CD3e	C3e/1931(M)	Mem	Lymph Node And Tonsil	IVD	AM931E
CD4	4B12(M)	Mem	Tonsil	IVD	AM421
CD4	EP204(R)	Mem	Tonsil	IVD	AN722
CD5	4C7(M)	Mem	Tonsil	IVD	AM430
CD5	EP77(R)	Mem	Tonsil	IVD	AN824
CD7	SP94(R)	Mem	Tonsil	IVD	AM702
CD7	LP15(M)	Mem	Tonsil	IVD	AN761
CD8	T8(M)	Mem(Frozen)	Frozen Tonsil	IVD	AM261
CD8	SP16(R)	Mem	Tonsil	IVD	AN740
CD8a	C8/468(M)	Mem	Tonsil	IVD	AM929E
CD10	56C6(M)	Mem	Kidney	IVD	AM451
CD11b/ITAM	M01(M)	Mem(Frozen)	Frozen Tonsil	IVD	AM270
CD11b/ITAM	EP45(R)	Mem	Spleen	IVD	AN851
CD11c	EP157(R)	Mem	Tonsil	IVD	AN822
CD13	EP117(R)	Mem	Lymphoma	IVD	AN832
CD14	EP128(R)	Cyt/Mem	Tonsil	IVD	AN814
CD15 (Blood group antigen Lewis X)	BRA4F1(M)	Mem/ perinuclear/Cyt	Hodgkin	IVD	AM302
CD16	2H7(M)	Mem/Cyt	Lymph Node	IVD	AM437
CD16a	SP189(R)	Mem	Tonsil/Lung	IVD	AN749
CD16a	SP175(R)	Cyt/Cell-Cell Junctions	Tonsil	IVD	AN762
CD19	EP169(R)	Mem	Tonsil	IVD	AN729
CD20	CD20/C23(M)	Mem	Spleen	IVD	AM537
CD20 (B cell)	L-26(M)	Mem	Tonsil	IVD	AM238
CD20/MS4A1	IGEL/773(M)	Mem	Tonsil	IVD	AM947
CD21	B2(M)	Mem(Frozen)	Frozen Tonsil	IVD	AM266
CD21	SP186(R)	Mem	Tonsil	IVD	AN745E
CD21	EP64(R)	Mem	Tonsil	IVD	AN825

Please consult the data sheet for pre-treatment and protocol information. Unless specified otherwise, all primary antibodies listed in this table are for FFPE tissue specimens

* M: Mouse; R:Rabbit

Antibody	Clone (Species)*	Localization	Positive Control	Regulatory Classification	SKU Family
CD22	FPC1(M)	Mem	Tonsil	IVD	AM439
CD22	BLCAM/1795(M)	Mem	Tonsil	IVD	AM962
CD23	SP23(R)	Mem	Tonsil	IVD	AN988
CD23	Polyclonal(R)	Mem	Lymph Nose	IVD	AR460
CD27	Polyclonal(R)	Mem	Tonsil	IVD	AR912E
CD29	JB1a(M)	Mem	Breast	IVD	AM298
CD30	EPR4102(R)	Mem	Hodgkins Lymphoma	IVD	AN955
CD30 (Ki-1 Antigen)	Ber-H2(M)	Mem/Cyt	Hodgkin	IVD	AM327
CD30 (Ki-1 Antigen)	HRS-4(M)	Mem and perinuclear structures/Cyt	Hodgkin	IVD	AM351
CD31	C31.3+ C31.7+ C31.10(M)	Mem	Tonsil	IVD	AM979
CD31 (Endothelial Cell)	JC/70A(M)	Mem/Cyt	Colon Ca	IVD	AM232
CD31 (PECAM-1)	9G11(M)	Mem/Cyt	Tonsil	IVD	AM241
CD34 (Endothelial Cell)	QBend/10(M)	Mem	Colon Ca	IVD	AM236
CD34 (Endothelial Cell)	EP88(R)	Mem	Colon Ca	IVD	AN779
CD35	RLB25(M)	Mem	Tonsil	IVD	AM431
CD35	SP191(R)	Mem	Tonsil	IVD	AN741E
CD38	SP149(R)	Mem/Cyt	Tonsil	IVD	AN769
CD40	CL1673(M)	Mem	Tonsil	IVD	AM913E
CD41/Integrin	EP178(R)	Mem/Cyt	Spleen Ca	IVD	AN732E
CD43 & CD45RA Cocktail	MT1 & MB1(M)	Mem	Tonsil	IVD	AM159
CD43 (T Cell, Leukosialin)	DFT-1(M)	Mem	Tonsil	IVD	AM305
CD43 (T Cell, Leukosialin)	SP55(R)	Mem	Tonsil	IVD	AN748
CD44 (Phagocytic Glycoprotein-1, HCAM)	DF1485(M)	Mem	Tonsil	IVD	AM310
CD45	2B11 & PD7/26(M)	Mem	Tonsil	IVD	AM941
CD45 (Leukocyte common Antigen, LCA)	PD7/26/16 & 2B11(M)	Mem	Tonsil	IVD	AM111
CD45 (Leukocyte common Antigen, LCA)	LJ27.9(M)	Mem	Tonsil	IVD	AM338
CD45 Cocktail (Leukocyte Antigen, LCA)	MEM55+LJ27.9 (M)	Mem	Tonsil	IVD	AM371
CD45RA	PTPRC/1131(M)	Mem	Tonsil	IVD	AM983
CD45RA (B cell)	MB1(M)	Mem	Tonsil	IVD	AM157
CD45RB	MEM55(M)	Mem	Tonsil	IVD	AM320
CD45RC (T Cell)	MT2(M)	Mem	Tonsil	IVD	AM156
CD45RO (T Cell)	UCHL-1(M)	Mem	Tonsil	IVD	AM113
CD48	EP148(R)	Mem	Tonsil	IVD	AN721E
CD53	EP179(R)	Mem	Tonsil	IVD	AN734
CD56 (Natural Killer Cell, NCAM)	NKH-1(M)	Mem(Frozen)	Frozen Tonsil	IVD	AM268
CD57 (Natural Killer Cell)	NK-1(M)	Mem/Cyt	Tonsil	IVD	AM314
CD61/Integrin β3	ITG/2145(M)	Mem	Rcc, Spleen	IVD	AM942E
CD63	EP211(R)	Cyt/Mem	Prostate/Melanoma	IVD	AN720E
CD66	BY114(M)	Mem	Tonsil	IVD	AM325
CD68	KP1(M)	Cyt	Lymph Node	IVD	AM416
CD68	CD68/G2(M)	Cyt	Histiocytoma	IVD	AM549
CD71 (transferrin Receptor)	T9(M)	Mem(Frozen)	Frozen Tonsil	IVD	AM269

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Antibody	Clone (Species)*	Localization	Positive Control	Regulatory Classification	SKU Family
CD71 (transferrin Receptor)	H68.4(M)	Mem/Cyt	Bone Marrow	IVD	AM354
CD73	1D7(M)	Mem	Tonsil	IVD	AM904E
CD74 (B cell)	LN2(M)	Mem/Cyt	Tonsil	IVD	AM153
CD79a	11E 3(M)	Mem/Cyt	Tonsil	IVD	AM414
CD79a	EP82(R)	Mem/Cyt	Lymph Node	IVD	AN719
CD79a	SP18(R)	Mem	Tonsil	IVD	AN767
CD82	EP160(R)	Mem	Adeno Ca	IVD	AN757
CD90	EP56(R)	Mem/Cyt	Thymus	IVD	AN733
CD95	EP208(R)	Mem/Cyt	Tonsil	IVD	AN742E
CD99	HO36.1.1(M)	Mem	Ewings Sarcoma	IVD	AM355
CD99	EP8(R)	Mem	Ewing'S Sarcoma	IVD	AN850
CD103	EP206(R)	Mem	Colon Ca	IVD	AN739
CD105	4G11(M)	Mem/Cyt	Uterus	IVD	AM441
CD105	ENG/3269(M)	Mem/Cyt	Uterus	IVD	AM990
CD117	T595(M)	Mem/Cyt	Stomach	IVD	AM423
CD117/c-Kit/SCF-Receptor	Polyclonal(R)	Mem/Cyt	Gist	IVD	AR759
CD138	EP201(R)	Nuc	Tonsil	IVD	AN837
CD146	EP54(R)	Cyt/Mem	Placenta	IVD	AN716
CD163	M130/2162(M)	Mem/Cyt	Tonsil	IVD	AMA02
CD205	EP176(R)	Mem/Cyt	Tonsil	IVD	AN737E
CD227 (MUCIN 1)	VU-4H5(M)	Cyt	Mucinous Adeno Ca	IVD	AM534
CDK1	A17.1.1(M)	Cyt	Tonsil	IVD	AM905E
CDK2	SP80(R)	Cyt	Tonsil	IVD	AN906E
CDK9	K.513.1(R)	Nuc	Cervical Ca	IVD	AN908E
CDw75 (B cell)	LN1(M)	Mem/Cyt	Tonsil	IVD	AM152
CDX-2	CDX2-88(M)	Nuc	Colon	IVD	AM392
CDX-2	EP25(R)	Nuc	Colon Ca	IVD	AN777
CEACAM1	Polyclonal(R)	Mem/Cyt	Colon Ca	IVD	AR909
c-erbB-2 (HER-2/neu)	SP101(R)	Mem/Cyt	Breast Ca	IVD	AN752E
c-erbB-2 (HER-2/neu)	SP3(R)	Mem/Cyt	Breast Ca	IVD	AN753E
c-erbB-2 (Her-2/neu)	CB11(M)	Mem	Breast Ca	IVD	AM134E
c-erbB-3 (HER-3)	RTJ1/A2(M)	Mem	Breast Ca	IVD	AM319
Chromogranin A	PHE-5(M)	Cyt	Pancreas	IVD	AM126
Chromogranin A	LK2H10(M)	Cyt	Pancreas	IVD	AM356
c-Jun	4H9(M)	Mem	Stomach	IVD	AM958
c-Kit / CD117	EP10(R)	Mem	Stomach	IVD	AN818E
Claudin-5	EP224(R)	Cell junction/ Mem	Lung Squamous Ca	IVD	AN718
c-myc Protein	9E10(M)	Nuc	Adeno Ca	IVD	AM318
CNPase (Myelin)	SMI 91(M)	Mem	Brain	IVD	AM959E
Coagulation Factor XIIIa	SP196(R)	Cyt	Placenta	IVD	AN755
Collagen III	HWD1.1(M)	Extracellular matrix	Skin	IVD	AM167
Collagen IV	COL-94(M)	Basal laminae/ Cyt	Skin	IVD	AM379
Cyclin D1	EP12(R)	Nuc/Cyt	Breast Ca	IVD	AN815

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Cyclin D1	Polyclonal(R)	Nuc	Breast Ca	IVD	AR447
Cyclin E1	EP126(R)	Nuc	Placenta	IVD	AN854
Cytokeratin 4	6B10(M)	Cyt	Tonsil	IVD	AM705
Cytokeratin 4	EP4(R)	Cyt	Esophagus	IVD	AN717
Cytokeratin 5	EP24(R)	Cyt	Mesothelioma	IVD	AN847
Cytokeratin 5	EP42(R)	Cyt	Cervical Ca	IVD	AN853
Cytokeratin 5 + Cytokeratin 14	EP24 + EP61(R)	Cyt	Prostate	IVD	AN730E
Cytokeratin 5&6	EP24 & EP67(R)	Cyt	Cervical Ca	IVD	AN892
Cytokeratin 6	EP67(R)	Cyt	Cervical	IVD	AN845
Cytokeratin 7	OV-TL12/30(M)	Cyt	Breast Ca	IVD	AM255
Cytokeratin 7	KRT7/760(M)	Cyt	Breast Ca	IVD	AM944
Cytokeratin 7&8	OV-TL12/30 & C51(M)	Cyt	Breast Ca	IVD	AM587
Cytokeratin 8	C51(M)	Cyt	Breast Ca	IVD	AM142
Cytokeratin 8&18	5D3(M)	Cyt	Colon Ca	IVD	AM131
Cytokeratin 10	DEK-10(M)	Cyt	Skin	IVD	AM201
Cytokeratin 13	AE8(M)	Cyt	Tonsil	IVD	AM132
Cytokeratin 13	KRT13/2213(M)	Cyt	Tonsil	IVD	AM989
Cytokeratin 14	LL002(M)	Cyt	Squamous Cell Ca	IVD	AM146
Cytokeratin 14	EP61(R)	Cyt	Prostate	IVD	AN831
Cytokeratin 15	EP14(R)	Cyt	Squamous	IVD	AN855
Cytokeratin 16	KRT16/2043R(R)	Cyt	Tonsil, Skin. Bladder, or Cervix	IVD	AN933
Cytokeratin 17	E27(M)	Cyt	Squamous Cell Ca	IVD	AM572
Cytokeratin 17	KRT17/778(M)	Cyt	Squamous Cell Ca	IVD	AM981
Cytokeratin 18	DC-10(M)	Cyt	Breast Ca	IVD	AM143
Cytokeratin 19	RCK108(M)	Cyt	Colon Ca	IVD	AM246
Cytokeratin 20	IT-Ks20.8(M)	Cyt	Colon Ca	IVD	AM315
Cytokeratin 20	EP23(R)	Cyt	Colon Ca	IVD	AN849
Cytokeratin Cocktail	AE1 & AE3(M)	Cyt	Skin	IVD	AM071
Cytokeratin cocktail, broad spectrum	34βE12/C51/AE1(M)	Cyt	Skin, Breast Ca	IVD	AM273
Cytokeratin cocktail, broad spectrum	LL002+DEK-10+RCK108+OV-TL12/30+C11(M)	Cyt	Breast Ca	IVD	AM372
Cytokeratin HMW (Basic)	AE3(M)	Cyt	Squamous Cell Ca	IVD	AM133
Cytokeratin, High MW	34βE12(M)	Cyt	Prostate	IVD	AM291
Cytokeratin, Low MW	AE1(M)	Cyt	Breast Ca	IVD	AM075
Cytokeratin, Pan	Lu-5(M)	Cyt	Colon Ca	IVD	AM181
Cytokeratin, Pan	C11(M)	Cyt	Breast Ca	IVD	AM357
Cytomegalovirus (CMV)	BM204(M)	Nuc	Cmv Inf. Lung	IVD	AM254E
Cytomegalovirus (CMV)	DDG9/CCH2(M)	Nuc	Cmv Inf. Lung	IVD	AM997
Desmin	D33(M)	Cyt	Leiomyma	IVD	AM072
DOG1	1.1(M)	Cyt/Mem	Gist	IVD	AM570
dsDNA	121-3(M)		Prostate And Thyroid Cancer	RUO	AM934
Dystrophin 1	Dys1 (Dy4/6D3)(M)	Mem	Muscle	IVD	AM243
Dystrophin 2	Dys2 (Dy8/6C5)(M)	Mem	Muscle	IVD	AM244

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Antibody	Clone (Species)*	Localization	Positive Control	Regulatory Classification	SKU Family
E-Cadherin	36(M)	Mem	Colon Ca	IVD	AM390
E-Cadherin	EP6(R)	Mem	Breast Ca	IVD	AN725
EGFR	EP22(R)	Nuc/Cyt	Lung Squamous Ca	IVD	AN781E
EGFR	Polyclonal(R)	Mem/Cyt	Squamous Ca	IVD	AR335E
Ep-CAM	EP155(R)	Mem	Adenoma	IVD	AN820
Epithelial Membrane Antigen (EMA)	E29(M)	Mem/Cyt	Lung	IVD	AM057
Epithelial Membrane Antigen (EMA)	Mc5(M)	Mem/Cyt	Breast Ca	IVD	AM182
Epithelial Specific Antigen (ESA)	MOC-31(M)	Mem	Colon Ca	IVD	AM316
Epstein-Barr Virus (EBV) Early Antigen	1108-1(M)	Nuc/Cyt	Bion Slide	IVD	AM222E
ERG, Ets-Related Gene	EP111(R)	Nuc	Prostate	IVD	AN782
Estradiol	Polyclonal(R)	Nuc	Breast Ca	IVD	AR038
Estrogen Receptor (ER) Beta	Polyclonal(R)	Nuc	Breast Ca	IVD	AR385
Estrogen Receptor (ER) Alpha	EP1(R)	Nuc	Breast Ca	IVD	AN710E
Estrogen Receptor α	ESR1/1935(M)	Nuc	Lung Cancer, Tonsil	IVD	AM924E
Estrogen Receptor, ER (InSite®)	ER88(M)	Nuc	Breast Ca	IVD	AM368
Factor VIII-Related Antigen	F8 2.2.9(M)	Cyt	Leiomyoma	IVD	AM016
Factor XIIIa	E980.1(M)	Cyt	Placenta	IVD	AM337
Fascin	FCN01(M)	Cyt	Lymph Node	IVD	AM488
Ferritin Light chain	FTL/1389(M)	Mem/Cyt	Lung Cancer, Tonsil	IVD	AM935E
FLI1	Polyclonal(R)	Nuc	Ewing'S Sarcoma	IVD	AR798
Follicle Stimulating Hormone (FSH)	Polyclonal(R)	Cyt	Pituitary	IVD	AR766
Gastrin	Polyclonal(R)	Cyt	Stomach	IVD	AR019
GCDFP-15	PIP/1571(M)	Cyt/Secreted	Breast, Salivary Gland	IVD	AM953
GCDFP-15	EP95(R)	Cyt/Secreted	Breast Ca	IVD	AN856
GH	GH/1450(M)	Cyt	Pituitary	IVD	AM925E
GITR	Polyclonal(R)	Mem	Tonsil	IVD	AR915E
Glial Fibrillary Acidic Protein (GFAP)	EP13(R)	Cyt	Cerebellum	IVD	AM020
Glial Fibrillary Acidic Protein (GFAP)	Polyclonal(R)	Cyt	Cerebellum	IVD	AN783
Glial Fibrillary Acidic Protein (GFAP)	GA-5(M)	Cyt	Cerebellum	IVD	AR020
Glomerular Epithelial Protein 1 (GLEPP-1)	5C11(M)	Mem	Kidney	IVD	AM336
Glucagon	Polyclonal(R)	Cyt	Pancreas	IVD	AR039
GLUT-1	SPM498(M)	Mem/Cyt	Squamous Ca	IVD	AM505
Glutathione S-Transferase Pi (GST Pi)	Polyclonal(R)	Nuc/Cyt	Breast	IVD	AR249
Glypican-3 (GPC3)	GPC3-88(M)	Cyt/Mem	Hepatocellular Ca	RUO	AM539
Granulocyte	BM-2(M)	Cyt	Hodgkin	IVD	AM210
Granzyme B	GZMB/3014(M)	Cyt	Lymph Node	IVD	AM996
H.Pylori	ULC3R(M)	Spiral Shaped Bacterium	Stomach	IVD	AM880E
HCGα	HCGα/53(M)	Cyt	Placenta	IVD	AM930E
Heat Shock Protein 27 (HSP 27)	G3.1(M)	Cyt	Breast Ca	IVD	AM171
Heat Shock Protein 70 (HSP 70)	BRM-22(M)	Cyt	Breast Ca	IVD	AM289
Hemoglobin A	EPR3608(R)	Cyt	Spleen	IVD	AN977
Hemoglobin A	Polyclonal(R)	Cyt	Placenta	IVD	AR021
Hepatitis B Virus Core Antigen (HBcAg)	Polyclonal(R)	Cyt	Hepatitis	IVD	AR082E
Her2/ErbB2	EP3(R)	Mem	Breast Ca	IVD	AN726E

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Antibody	Clone (Species)*	Localization	Positive Control	Regulatory Classification	SKU Family
Herpes Simplex Virus Type I (HSV I)	Polyclonal(R)	Nuc	Hsv Inf. Culture	IVD	AR084E
Herpes Simplex Virus Type II (HSV II)	Polyclonal(R)	Nuc	Hsv Inf. Culture	IVD	AR085E
HLA-DR	LN3(M)	Mem	Tonsil	IVD	AM154
HSA	HSA/E8(M)	Cyt	Liver	IVD	AM550
Human Chorionic Gonadotropin (hCG) Beta	M94138(M)	Cyt	Placenta	IVD	AM395
human Growth Hormon (hGH)	Polyclonal (R)	Cyt	Placenta	IVD	AR707
IDO	4D2(M)	Cyt	Spleen	IVD	AM916E
IgA	IA761(M)	Mem/Cyt	Tonsil	IVD	AMA03
IgA	Polyclonal(R)	Mem/Cyt	Tonsil	IVD	AR045
IgD	Polyclonal(R)	Mem/Cyt	Tonsil	IVD	AR440
IgG	Polyclonal(R)	Mem/Cyt	Tonsil	IVD	AM367
IgG	IgG88(M)	Mem/Cyt	Tonsil	IVD	AR050
IgM	IgM88(M)	Mem/Cyt	Tonsil	IVD	AM366
IgM	Polyclonal(R)	Mem/Cyt	Tonsil	IVD	AR427
Inhibin-Alpha	R1(M)	Cyt	Ovary	IVD	AM446
Insulin	HB125(M)	Cyt	Pancreas	IVD	AM029
Insulin	EP125(R)	Cyt	Pancreas	IVD	AN735
J chain	JC88(M)	Cyt	Tonsil, Lymph Node	IVD	AM374
J chain	SP105(R)	Perinuclear spaces and endoplamic reticulum of lymphocytes	Tonsil	IVD	AN756
Kappa Light Chain	L1C1(M)	Cyt	Tonsil	IVD	AM048
Kappa Light Chain	K88(M)	Cyt	Tonsil	IVD	AM369
Kappa Light Chain	HP6053+L1C1(M)	Cyt	Tonsil	IVD	AM980
Ki-67	MIB-1(M)	Nuc	Lymphoma, Lymph Node, Tonsil	IVD	AM297
Ki-67	K-2(M)	Nuc	Tonsil	IVD	AM370
Ki-67	Ki88(M)	Nuc	Lymphoma, Lymph Node, Tonsil	IVD	AM410
Ki-67	MKI67/2462(M)	Nuc	Lymphoma, Lymph Node, Tonsil	IVD	AMA01
Ki-67	EP5(R)	Nuc	Lymphoma, Lymph Node, Tonsil	IVD	AN727
Ki-67 + Lambda Light Chain	K-2 + Polyclonal	Nuc/Cyt	Tonsil	IVD	AC562
KRAS	Polyclonal(R)	Mem	Colon Ca	IVD	AR751
LAG3	Polyclonal(R)	Cyt	Tonsil	IVD	AR917E
Lambda light chain	EP172(R)	Cyt	Tonsil	IVD	AN715
Lambda Light Chain	SP147(R)	Cyt	Tonsil	IVD	AN763
Lambda Light Chain	Polyclonal(R)	Cyt	Tonsil	IVD	AR049
Laminin	Polyclonal(R)	Basement Mem	Bronchus	IVD	AR078
Luteinizing Hormone (LH)	SP132(R)	Cyt/Perinuclear/ Surface/Nuc	Pituitary	IVD	AN787
Lysozyme	Polyclonal(R)	Cyt	Lymph Node	IVD	AR024
Macrophage	LN5(M)	Cyt	Liver	IVD	AM165
Mast Cell Tryptase	AA1(M)	Cyt	Skin	IVD	AM419

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Antibody	Clone (Species)*	Localization	Positive Control	Regulatory Classification	SKU Family
MCM2	SP85(R)	Nuc	Cervical Ca	IVD	AN773
MCM2	EP40(R)	Nuc	Tonsil	IVD	AN834
Melan-A (MART-1)	A103(M)	Cyt	Melanoma	IVD	AM361
Melanoma	HMB45(M)	Cyt	Melanoma	IVD	AM001
Melanoma gp100	gp100/D5(M)	Cyt	Melanoma	IVD	AM536
Melanoma-Associated Antigen	NKI/C3(M)	Cyt/Mem	Melanoma	IVD	AM077
Mesothelin	5B2(M)	Mem	Ovaryadenoma	IVD	AM433
MiTF	MiTF/A13(M)	Nuc	Melanoma	IVD	AM554
Mitochondrial Antigen	113-1(M)	Cyt	Liver	IVD	AM213
MLH1	ES05(M)	Nuc	Colon	IVD	AM703
MMP-9	EP127(R)	Mem/Cyt	Bone Marrow	IVD	AN816
MSH2	SP46(R)	Nuc	Colon Ca	IVD	AN743
MSH2	RED2(R)	Nuc	Colon Ca	IVD	AN744
MSH6	2D4B5(M)	Nuc	Colon Ca	IVD	AM454
MSH6	44(M)	Nuc	Colon Ca	IVD	AM999
Mucin 1 (MUC1)	EP85(R)	Mem	Breast	IVD	AN813
Mucin 2 (MUC2)	CCP58(M)	Cyt	Colon Ca	IVD	AM358
Mucin 4 (MUC4)	1G8(M)	Cyt	Colon Ca	IVD	AM455
Mucin 5AC (MUC5AC)	45M1(M)	Cyt	Gastro-Intestine	IVD	AM456
Multi-Drug Resistance Marker (P-Glycoprotein)	MDR88(M)	Mem/Cyt	Adrenal Gland	IVD	AM391
Mum/IRF4	SP114(R)	Nuc	Hodgkins	IVD	AN750
Muscle Actins	Actin 88 Cocktail(M)	Cyt	Muscle	IVD	AM381
Myelin Basic Protein	MBP88(M)	Cyt	Cerebellum	IVD	AM380
Myeloid Specific Antigen	BM-1(M)	Cyt	Lymph Node	IVD	AM164
Myeloid Specific Antigen	BM-3(M)	Cyt	Lymph Node	IVD	AM216
Myeloperoxidase (MPO)	Polyclonal(R)	Cyt	Spleen	IVD	AR496
Myogenin	LO26(M)	Nuc	Rhabdomy	IVD	AM432
Myogenin	MGN185(M)	Nuc	Rhabdomy	IVD	AM987
Myogenin	EP162(R)	Nuc	Rhabdomy	IVD	AN789
Myoglobin	MG-1(M)	Cyt	Muscle	IVD	AM012
Myoglobin	Polyclonal(R)	Cyt	Muscle	IVD	AR012
Myosin Heavy Chain, Smooth Muscle	SMMS.1(M)	Cyt	Breast	IVD	AM331
Myosin, Skeletal Muscle	MY-32(M)	Cyt	Muscle	IVD	AM109
Napsin A	IP64(M)	Cyt	Lung / Adeno Ca	IVD	AM701
N-cadherin	5D5(M)	Mem	Heart	IVD	AM928
Neurofilament	NE-14(M)	Cyt	Nerve	IVD	AM073
Neuron Specific Enolase (NSE)	MIG-N3(M)	Cyt	Nerve	IVD	AM055
NGF Receptor	EP31(R)	Mem	Brain	IVD	AN738
Oct-2	EP115(R)	Nuc	Tonsil	IVD	AN830
Oct-4	EP143(R)	Nuc	Testis	IVD	AN724
Osteonectin	OST1(M)	Cyt	Osteosarcoma	IVD	AM387
p16 (INK4a)	G175-405(M)	Nuc/Cyt	Cervical Carinoma, Squamous Cell Carinoma	RUO	AM540
p16 + Ki67	G175-405 + EPR3611(M&R)	Nuc/Cyt	Cervical Ca	RUO	AC601

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p21/WAF1	4D10(M)	Nuc	Melamona	IVD	AM434
p27 (Kip1)	DCS72(M)	Nuc	Breast	IVD	AM396
p27 (Kip1)	EP104(R)	Nuc/Cyt	Breast	IVD	AN817
p34 (cdc2 Cyclin Dependent Kinase)	POH-1(M)	Nuc/Cyt	Tonsil	IVD	AM301
p53	EP9(R)	Nuc	Breast Ca	IVD	AN728
p53 Protein	BP53-12-1(M)	Nuc	Breast Ca	IVD	AM195
p53 Protein	DO7(M)	Nuc	Breast Ca.	IVD	AM239
p53 Protein	1801(M)	Nuc	Breast Ca	IVD	AM240
p63	4A4(M)	Nuc	Prostate Ca	IVD	AM418
p105 PANA	2B3(M)	Nuc	Tonsil	IVD	AM317
p120 (Catenin delta 1)	SP63(R)	Mem/Cyt	Breast	IVD	AN760
P504S (AMACR)	13H4(R)	Cyt	Prostate Ca	IVD	AN449E
P504S (AMACR)	RBT-AMACR(R)	Cyt	Prostate Ca	IVD	AN538
PAP	A40010(M)	Cyt	Prostate Ca	IVD	AM532
Papillomavirus Type 16 (HPV-16)	Cam Vir-1(M)	Nuc/Cyt	Hpv Inf	IVD	AM362E
Pax-5	ZP007(M)	Nuc	Tonsil	IVD	AM457
Pax-5	24/Pax-5(M)	Nuc	Breast, Salivary Gland	IVD	AM967E
Paxillin	EP89(R)	Cyt	Breast Ca	IVD	AN876
PD-1	IHC001(M)	Mem	Lung Cancer, Tonsil	IVD	AM922
PDCD4	EP102(R)	Cyt/Nuc	Colon Ca	IVD	AN875
PDGFR BETA (CD140b)	RM303(R)	Cyt	Skin	IVD	AN992
PD-L1	IHC411(R)	Mem	Tonsil, Lung Adenocarcinoma	IVD	AN921
PGP9.5	3D9(M)	Cyt	Brain	IVD	AM736
PIN4	13H4+ 34ßE12+ 4A4(R&M)	Nuc/Cyt	Prostate	IVD	AM448E
Placental Alkaline Phosphatase (PLAP)	PL8-F6(M)	Cyt	Placenta	IVD	AM228
Placental Lactogen (hPL)	Polyclonal(R)	Cyt	Placenta	IVD	AR040
Platelet-Derived Growth Factor (PDGF)	PDGF88(M)	Cyt	Squamous Ca	IVD	AM376
Platelet-Derived Growth Factor (PDGF)	Polyclonal(R)	Cyt	Squamous Ca	IVD	AR376
PMS2	EP51(R)	Nuc	Colon Ca	IVD	AN844E
Progesterone Receptor	1A6(M)	Nuc	Breast Ca	IVD	AM172E
Progesterone Receptor (PR)	EP2(R)	Nuc	Breast Ca	IVD	AN711E
Progesterone Receptor, PR (InSite®)	PR88(M)	Nuc	Breast Ca	IVD	AM328
Prolactin	ME.121(M)	Cyt/Mem	Pituitary	IVD	AM031
Prolactin	PRL/2644(M)	Cyt/Mem	Pituitary	IVD	AM978
Proliferating Cell Nuclear Antigen (PCNA)	PC10(M)	Nuc	Colon Ca	IVD	AM252
Prostate Specific Acid Phosphatase (PSAP)	B01-94-21M-NA(M)	Cyt	Prostate Hyper	IVD	AM013
Prostate Specific Antigen (PSA)	ErPr8(M)	Cyt	Prostate Hyper	IVD	AM014
Prostate Specific Antigen (PSA)	IHC654(M)	Cyt	Prostate Hyper	IVD	AM985
pS2 Estrogen Inducible Protein	PS2.1(M)	Cyt	Breast Ca	IVD	AM190
PSMA	EP192(R)	Cyt/Mem	Prostate	IVD	AN714
PSMA	SP29(R)	Cyt/Mem	Prostate Ca	IVD	AN768
PTEN	SP218(R)	Mem/Cyt/Nuc	Prostate Ca	IVD	AN746
P-Tyr	PY793(M)	Mem	Lung Cancer, Tonsil	IVD	AM938E
PU.1	EP18(R)	Nuc	Lymphoma	IVD	AN843

Please consult the data sheet for pre-treatment and protocol information. Unless specified otherwise, all primary antibodies listed in this table are for FFPE tissue specimens

* M: Mouse; R:Rabbit

Antibody	Clone (Species)*	Localization	Positive Control	Regulatory Classification	SKU Family
Renal Cell Carcinoma (RCC)	RCC-26(M)	Cyt/Mem	Renal Cell Carcinoma	IVD	AM543
Ribonucleoprotein (RNP)	58-15(M)	Nuc	Spleen	IVD	AM230
S100 Beta	EP32(R)	Cyt	Melanoma	IVD	AN713
S100 Protein	15E2E2(M)	Nuc/Cyt	Melanoma	IVD	AM058
S100 Protein	Polyclonal(R)	Nuc/Cyt	Melanoma	IVD	AR058
S100B	Polyclonal(R)	Cyt	Melanoma	IVD	AR991
S100P	16/f5(M)	Nuc/Cyt	Tonsil	IVD	AM993
S100P	EP186(R)	Cyt/Nuc	Melanoma	IVD	AN712
Sarcomeric Actin	ZMSA-5(M)	Cyt	Muscle	IVD	AM511
Secretin	Polyclonal(R)	Cyt	Stomach	IVD	AR067
SLAMF7	Polyclonal(R)	Mem	Tonsil	ASR/RUO	AR920
SOX2	Polyclonal(R)	Nuc	Uterus Cervix	IVD	AN833
SOX2	EP103(R)	Nuc	Squamous	IVD	AR788
SOX10	SOX10/991(M)	Nuc	Salivary Gland	IVD	AM995
STAT5 alpha	6D4(M)	Mem	Placenta, Breast	RUO	AM972
Substance P	Polyclonal(R)	Cyt	Hypothalamus	IVD	AR069
Survivin	EP119(R)	Nuc/Cyt	Bladder	IVD	AN826
Synaptophysin	Snp88(M)	Cyt	Pancreas	IVD	AM363
Synaptophysin	EP158(R)	Cyt	Pancreas	IVD	AN857
Tau	TAU-2(M)	Cyt	Cerebellum	IVD	AM412
Tau	Tau-5(M)	Cyt	Cerebellum	IVD	AM459
Terminal Deoxynucleotidyl Transferase (TdT)	EP266(R)	Nuc	Thymoma	IVD	AN881
Thyroglobulin	2H11(M)	Cyt	Follicular Adenoma	IVD	AM032
Thyroid Stimulating Hormone (TSH)	5404(M)	Cyt	Pituitary	IVD	AM033
Thyroid Stimulating Hormone (TSH)	Polyclonal(R)	Cyt	Pituitary	IVD	AR033
Thyroid Transcription Factor (TTF-1)	SP141(R)	Nucleus	Thyroid	IVD	AN887
Thyroxine	D5(M)	Cyt	Thyroid	IVD	AM034
TIA-1	2G9A10F5(M)	Cyt	Anaplastic Large	IVD	AM529
Topoisomerase II, Alpha (TOP2A)	EP93(R)	Nuc	Breast Ca	IVD	AN823
Toxoplasma gondii	Polyclonal(R)	Cyt	Toxoplasma Inf.	IVD	AR125
Transferrin	HT1/13.6.3(M)	Cyt	Liver	IVD	AM025
Transforming Growth Factor (TGF) Alpha	TGF88(M)	Cyt	Breast Ca	IVD	AM377
Tubulin β3	TUJ1(M)	Mem	Brain	IVD	AM952
Tumor-Associated Glycoprotein (TAG-72)	B72.3(M)	Cyt	Breast Ca	IVD	AM054
Tumor-Associated Glycoprotein (TAG-90 BCA)	B6.2(M)	Cyt	Breast Ca	IVD	AM005
Tyrosinase	Ty/G5(M)	Cyt	Melanoma	IVD	AM535
VEGF	Polyclonal(R)	Cyt	Angiosarcoma	IVD	AR483
Vimentin	V9(M)	Cyt	Leiomyoma	IVD	AM074
Vimentin	LN6(M)	Cyt	Leiomyoma	IVD	AM163
VIP	Polyclonal(R)	Cyt	Colon	IVD	AR530
vWF	VWF/2480(M)	Cyt	Tonsil	IVD	AMA04
WT1	WT1/1434R(R)	Mem	Wilm's Tumor And Mesthelioma	IVD	AN940
ZAP-70	ZAP70-C3(M)	Cyt/Mem	Tonsil	IVD	AM544
ZAP-70	EP52(R)	Cyt/Mem	Tonsil	IVD	AN852

Please consult the data sheet for pre-treatment and protocol information. Unless specified otherwise, all primary antibodies listed in this table are for FFPE tissue specimens

* M: Mouse; R:Rabbit

Listing by Categories

Categories	Clone
ACUTE MYELOID LEUKEMIA	
CD13	EP117(R)
CD34 (Endothelial Cell)	QBend/10(M)
MCM2	SP85(R)
Myeloperoxidase (MPO)	Polyclonal(R)
ADHESION MOLECULES	
CD27	Polyclonal(R)
Beta-Catenin	EP35(R)
CD138	EP201(R)
CD22	FPC1(M)
CD31 (PECAM-1)	9G11(M)
CD44 (Phagocytic Glycoprotein-1,HCAM)	DF1485(M)
E-Cadherin	36(M)
E-Cadherin	EP6(R)
Ep-CAM	EP155(R)
ADRENAL TUMORS	
CD56 (Natural Killer Cell,NCAM)	NKH-1(M)
Inhibin-Alpha	R1(M)
Synaptophysin	Snp88(M)
Synaptophysin	EP158(R)
AMYLOID	
Kappa Light Chain	L1C1(M)
Kappa Light Chain	K88(M)
Lambda Light Chain	Polyclonal(R)
Lambda Light Chain	EP172(R)
BLADDER	
CD44 (Phagocytic Glycoprotein-1,HCAM)	DF1485(M)
c-erbB-2 (HER-2/neu)	EP3(R)
Cytokeratin 20	EP23
Cytokeratin 20	IT-Ks20.8(M)
Cytokeratin, High MW (Basic)	AE3(M)
Cytokeratin, Low MW	AE1(M)
Ki-67	K-2(M)
Ki-67 Antigen, Proliferating Cell	MIB-1(M)
Ki-67 Antigen, Proliferating Cell	Ki88(M)
MMP-9	EP127(R)
p53	EP9(R)
p53 Protein	BP53-12-1(M)
p53 Protein	DO7(M)
p53 Protein	1801(M)
BLOOD GROUP ANTIGEN	
Blood Group Antigen Lewis A	7LE(M)
Blood Group Antigen Lewis B	2-25LE(M)

Categories	Clone
BRAIN PATHOLOGY	
Epithelial Membrane Antigen (EMA)	E29(M)
Epithelial Membrane Antigen (EMA)	Mc5(M)
Follicle Stimulating Hormone (FSH)	Polyclonal(R)
Glial Fibrillary Acidic Protein (GFAP)	EP13(R)
Human Chorionic Gonadotropin (hCG) Beta	M94138(M)
HGH	Polyclonal(R)
Luteinizing Hormone (LH)	SP132(R)
BREAST PANEL	
Androgen Receptor	F39.4.1(M)
Bax Protein	Polyclonal(R)
Bcl-2α	SP66(R)
Bcl-2 Oncoprotein	Bcl-2/100(M)
BRCA1 Protein	Polyclonal(R)
Breast Cancer Antigen (BCA) 225	CU18(M)
CA 19-9	C241:5:1:4(M)
Calponin	CALP(M)
Calponin-1	EP63(R)
Cathepsin D	C15(M)
CD44 (Phagocytic Glycoprotein-1,HCAM)	DF1485(M)
CD66	BY114(M)
c-Kit/CD117	EP10(R)
CD117	T595(M)
CD227 (MUCIN 1)	VU-4H5(M)
c-erbB-2	SP3(R)
c-erbB-2	SP101(R)
c-erbB-2 (HER-2/neu)	CB11(M)
c-erbB-3 (HER-3)	RTJ1/A2(M)
Cytokeratin 5	EP24(R)
Cytokeratin 5	EP42(R)
Cytokeratin 6	EP67(R)
Cytokeratin 7	OV-TL12/30(M)
Cytokeratin 7 & 8	OV-TL12/30 & C51(M)
Cytokeratin 8	C-51(M)
Cytokeratin 14	EP61(R)
Cytokeratin 14	LL002(M)
EGFR	Polyclonal(R)
E-Cadherin	EP6(R)
E-Cadherin	36(M)
EGFR	EP22(R)
Estrogen Receptor, ER (InSite®)	ER88(M)
Fascin	FCN01(M)
Macrophage	LN5(M)
Mucin 1 (MUC1)	EP85(R)
Mucin 4 (MUC4)	1G8(M)

Listing by Categories

Categories	Clone
Mucin 2 (MUC2)	CCP58(M)
Myosin Heavy Chains,Smooth Muscle	SMMS.1(M)
p53	EP9(R)
p53 Protein	BP53-12-1(M)
p53 Protein	DO7(M)
p53 Protein	1801(M)
Progesterone Receptor (PR)	EP2(R)
Progesterone Receptor (PR)	1A6(M)
Progesterone Receptor, PR (InSite®)	PR88(M)
SOX2	Polyclonal(R)
SOX2	EP103(R)
Topoisomerase II, Alpha (TOP2A)	EP93(R)
Tumor-Associated Glycoprotein (TAG-72)	B72.3(M)
Tumor-Associated Glycoprotein (TAG-90 BCA)	B6.2(M)
CELL SURFACE MARKERS	
DOG1	1.1(M)
Glut-1	SPM498(M)
CELLULAR ANTIGENS	
Alpha-1-Antitrypsin	Polyclonal(R)
Cyclin D1	Polyclonal(R)
Cyclin D1	EP12(R)
CDK1	A17.1.1(M)
CDK2	SP80(R)
CDK9	K.513.1(R)
Dystrophin	Dys1(Dy4/6D3)(M)
Dystrophin	Dys2(Dy8/6C5)(M)
Glomerular Epithelial Protein 1 (GLEPP-1)	5C11(M)
Mitochondrial Antigen	113-1(M)
Myelin Basic Protein	MBP88(M)
Myoglobin	MG-1(M)
Myoglobin	Polyclonal(R)
Myosin,Skeletal Muscle	MY-32(M)
p27 (Kip1)	EP104(R)
p27 (Kip1)	DCS72(M)
PAX-5	ZP007(M)
PMS2	EP51(R)
Survivin	EP119(R)
CEACAM1	Polyclonal(R)
GITR	Polyclonal(R)
Transferrin	HT1/13.6.3(M)
IDO	4D2(M)
CERVICAL	
Carcinoembryonic Antigen (CEA)	B01-94-11M-P(M)
Carcinoembryonic Antigen (CEA)	CEA88(M)
Carcinoembryonic Antigen (CEA)	Polyclonal(R)
c-myc Protein	9E 10(M)
Cytokeratin 7	OV-TL12/30(M)

Categories	Clone
Cytokeratin 7 & 8	OV-TL12/30 & C51(M)
Cytokeratin 10	DEK-10(M)
Cytokeratin 13	AE8(M)
Cytokeratin 17	E27(M)
Cytokeratin 19	RCK108(M)
Cytokeratin 20	EP23
Cytokeratin 20	IT-Ks20.8(M)
Herpes Simplex Virus Type I (HSV I)	Polyclonal(R)
Herpes Simplex Virus Type II (HSV II)	Polyclonal(R)
Ki-67	K-2(M)
Ki-67 Antigen, Proliferating Cell	MIB-1(M)
Ki-67 Antigen, Proliferating Cell	Ki88(M)
p16 (INK4a)	G175-405(M)
p16 + Ki67	G175-405(M)+ EPR3611(R)
Papillomavirus Type 16 (HPV-16)	Cam Vir-1(M)
CNS TUMORS	
NGF Receptor	EP31(R)
COLON	
Bcl-2α	SP66(R)
Bcl-2 Oncoprotein	bcl-2/100(M)
CDX-2	EP25(R)
Fascin	FCN01(M)
p120 (Catenin delta 1)	SP63(R)
P504S (AMACR)	13H4(R)
P504S (AMACR)	RBT-AMACR(R)
COLORECTAL PANEL	
CA19-9	C241:5:1:4(M)
CA 125	Ov185:1(M)
Carcinoembryonic Antigen (CEA)	B01-94-11M-P(M)
Carcinoembryonic Antigen (CEA)	CEA88(M)
Carcinoembryonic Antigen (CEA)	Polyclonal(R)
CD10	56C6(M)
CDX-2	CDX2-88(M)
c-myc Protein	9E 10(M)
Cytokeratin 7	OV-TL12/30(M)
Cytokeratin 7 & 8	OV-TL12/30 & C51(M)
Cytokeratin 19	RCK108(M)
Cytokeratin 20	EP23
Cytokeratin 20	IT-Ks20.8(M)
Cytokeratin Cocktail	AE1 and AE3(M)
EGFR	Polyclonal(R)
Glut-1	SPM498(M)
KRAS	Polyclonal®
MLH1	ES05(M)
MSH2	SP46(R)
MSH2	RED2(R)

Categories	Clone
MSH6	2D4B5(M)
Mucin 1 (MUC1)	EP85(R)
Mucin 5AC (MUC5AC)	45M1(M)
Mucin 2 (MUC2)	CCP58(M)
p21/WAF1	4D10(M)
p53	EP9(R)
p53 Protein	BP53-12-1(M)
p53 Protein	DO7(M)
p53 Protein	1801(M)
PMS2	EP51(R)
CYTOTOXIC DRUG METABOLISM	
Glutathione S-Transferase Pi (GST Pi)	Polyclonal(R)
Multi-Drug Resistance Marker (P-Glycoprotein)	MDR88(M)
EMBRYONAL CARCINOMA	
Alpha-Fetoprotein (AFP)	C3(M)
ENDOCRINE PANEL	
ACTH	AH26(M)
Estradiol	Polyclonal(R)
Follicle Stimulating Hormone (FSH)	Polyclonal(R)
Glucagon	Polyclonal(R)
HGH	Polyclonal(R)
Human Chorionic Gonadotropin (hCG) Beta	M94138(M)
Inhibin-Alpha	R1(M)
Insulin	EP125(R)
Insulin	HB125(M)
Prolactin	ME.121(M)
Thyroglobulin	2H11(M)
Thyroid Stimulating Hormone (TSH)	5404(M)
Thyroid Stimulating Hormone (TSH)	Polyclonal(R)
Thyroxine	D5(M)
ENDOMETRIOID CARCINOMA	
Vimentin	V9(M)
ENDOTHELIAL VASCULAR MARKER	
CD31 (Endothelial Cell)	JC/70A(M)
CD31 (PECAM-1)	9G11(M)
CD34 (Endothelial Cell)	QBend/10(M)
CD34 (Endothelial Cell)	EP88(R)
Factor VIII-Related antigen	F8 2.2.9(M)
Factor XIII Subunit A	E980.1(M)
ENZYMES	
Alpha-1-Antichymotrypsin	α1A88(M)
Alpha-1-Antitrypsin	Polyclonal(R)
Cathepsin D	C15(M)
EPITHELIAL MARKERS	
CD34 (Endothelial Cell)	QBend/10(M)
Cytokeratin 4	EP4(R)
Cytokeratin 4	6B10(M)

Categories	Clone
Cytokeratin 6	EP67(R)
Cytokeratin 8 & 18	5D3(M)
Cytokeratin 18	DC-10(M)
Cytokeratin Cocktail	AE1 and AE3(M)
Cytokeratin cocktail, Broad Spectrum	34ßE12/C51/AE1(M)
Cytokeratin, High MW	34ßE12(M)
Cytokeratin, High MW (Basic)	AE3(M)
Cytokeratin, Low MW	AE1(M)
Cytokeratin, Pan	Lu-5(M)
Cytokeratin, Pan	C11(M)
Collagen IV	COL-94(M)
Ep-CAM	EP155(R)
Epithelial-Specific Antigen	MOC-31(M)
Glomerular Epithelial Protein 1 (GLEPP-1)	5C11(M)
MUC4	1G8(M)
Mucin 2 (MUC2)	CCP58(M)
EWING'S SARCOMA	
CD56 (Natural Killer Cell,NCAM)	NKH-1(M)
FLI1	Polyclonal(R)
EXTRACELLULAR MATRIX PROTEIN	
Collagen III	HWD1.1(M)
Collagen IV	COL-94(M)
Laminin	Polyclonal(R)
Osteonectin	OST1(M)
GASTROINTESTINAL PANEL	
Carcinoembryonic Antigen (CEA)	B01-94-11M-P(M)
Carcinoembryonic Antigen (CEA)	CEA88(M)
Carcinoembryonic Antigen (CEA)	Polyclonal(R)
c-Kit/CD117	EP10(R)
CD117	T595(M)
CDX-2	CDX2-88(M)
CD38	SP149(R)
c-erbB-2 (HER-2/neu)	EP3(R)
Cytokeratin 7	OV-TL12/30(M)
Cytokeratin 17	E27(M)
DOG1	1.1(M)
Secretin	Polyclonal(R)
Substance P	Polyclonal(R)
SOX2	Polyclonal(R)
SOX2	EP103(R)
Transforming Growth Factor (TGF) Alpha	TGF88(M)
GERM CELL TUMORS	
Alpha-Fetoprotein (AFP)	C3(M)
Glypican-3 (GPC3)	GPC3-88(M)
CD30 (Ki-1 Antigen)	HRS-4(M)
c-Kit/CD117	EP10(R)
CD117	T595(M)

Listing by Categories

Categories	Clone
Human Chorionic Gonadotropin (hCG) Beta	M94138(M)
Oct-4	EP143(R)
Placental Alkaline Phosphatase (PLAP)	PL8-F6(M)
GYNECOLOGICAL	
Placental Alkaline Phosphatase (PLAP)	PL8-F6(M)
Placental Lactogen (hPL)	Polyclonal(R)
HEMANGIOBLASTOMA	
CD31 (PECAM-1)	9G11(M)
CD34 (Endothelial Cell)	QBend/10(M)
HEMATOPOIETIC / LYMPHOID MARKERS	
CD41/Integrin	EP178(R)
CD53	EP179(R)
Granulocyte	BM-2(M)
Hemoglobin A	Polyclonal(R)
IgA	Polyclonal(R)
IgD	Polyclonal(R)
IgG	IgG88(R)
IgG	Polyclonal(R)
IgM	IgM88(M)
IgM	Polyclonal(R)
HODGKIN'S LYMPHOMA	
Bcl-6	LN22(M)
CD15 (Blood group antigen Lewis X)	BRA4F1(M)
CD30 (Ki-1 Antigen)	Ber-H2(M)
CD30 (Ki-1 Antigen)	HRS-4(M)
Coagulation Factor XIIIa	SP196(R)
Fascin	FCN01(M)
Mum/IRF4	SP114(R)
Oct-2	EP115(R)
HORMONE REGULATED PROTEIN	
Cathepsin D	C15(M)
Gastrin	Polyclonal(R)
Heat Shock Protein (HSP-70)	BRM-22(M)
Heat Shock Protein 27 (HSP 27)	G3.1(M)
pS2 Estrogen Inducible Protein	PS2.1(M)
Secretin	Polyclonal(R)
IMMUNOGLOBULIN & COMPLEMENT PROTEINS	
IgA	Polyclonal(R)
IgD	Polyclonal(R)
IgG	IgG88(R)
IgM	IgM88(M)
IgM	Polyclonal(R)
J Chain	JC88(M)
Kappa Light Chain	L1C1(M)
Kappa Light Chain	K88(M)
Lambda Light Chain	SP147(R)
Lambda Light Chain	EP172(R)

Categories	Clone
Lambda Light Chain	Polyclonal(R)
INFECTIOUS AGENTS	
Adenovirus	A62020069P(M)
Cytomegalovirus (CMV)	BM204(M)
Epstein-Barr Virus (EBV) Early Antigen	1108-1(M)
H.Pylori	ULC3R(M)
Hepatitis B Virus Core Antigen (HBcAg)	Polyclonal(R)
Herpes Simplex Virus Type I (HSV I)	Polyclonal(R)
Papillomavirus Type 16 (HPV-16)	CamVir-1(M)
Toxoplasma gondii	Polyclonal(R)
INTERMEDIATE FILAMENTS & CYTOSKELETAL PROTEINS	
Actin, Muscle-Specific	HHF35(M)
Actin, Smooth Muscle	1A4(M)
Alpha-Actinin	JLN20(M)
Alpha-Tubulin	DM-1A(M)
Beta-Tubulin	DM-1B(M)
Beta-Tubulin II	JDR3B8(M)
Beta-Tubulin III	SDL3D10(M)
Beta-Tubulin IV	ONS1A6(M)
Caldesmon	EP19(R)
Caldesmon HMW, Smooth muscle	h-CD(M)
Calponin-1	EP63(R)
Calponin	CALP(M)
Desmin	D33(M)
Dystrophin	Dys1(Dy4/6D3)(M)
Dystrophin	Dys2(Dy8/6C5)(M)
Fascin	FCN01(M)
Glial Fibrillary Acidic Protein (GFAP)	GA-5(M)
Glial Fibrillary Acidic Protein (GFAP)	Polyclonal(R)
Muscle Actins	Actin 88 Cocktail(M)
Myogenin	LO26(M)
Myoglobin	MG-1(M)
Myoglobin	Polyclonal(R)
Myosin Heavy Chain, Smooth Muscle	SMMS.1(M)
Myosin, Skeletal Muscle	MY-32(M)
Neurofilament	NE-14(M)
Osteonectin	OST1(M)
Paxillin	EP89(R)
Sarcomeric Actin	ZMSA-5(M)
Tau	Tau-2(M)
Tau	Tau-5(M)
Vimentin	V9(M)
Vimentin,Non-Hematopoietic	LN6(M)
KIDNEY: RENAL EPITHELIAL TUMORS	
CD117	T595(M)
LEUKEMIA	
BCR-ABL	7C6(M)

Categories	Clone
Bcl-2α	SP66(R)
CD117/c-Kit/SCF-Receptor	Polyclonal
c-Kit/CD117	EP10(R)
CD43	SP55(R)
Cyclin D1	EP12(R)
HLA-DR	LN3(M)
Lysozyme	Polyclonal(R)
MMP-9	EP127(R)
Myeloid specific Antigen	BM-3(M)
Myeloid specific Antigen	BM-1(M)
LAG3	Polyclonal(R)
SLAMF7	Polyclonal(R)
ZAP-70	EP52(R)
LIVER	
Alpha-1-Antichymotrypsin	α1A88(M)
Alpha-1-Antitrypsin	Polyclonal(R)
Alpha-Fetoprotein (AFP)	C3(M)
Glypican-3 (GPC3)	GPC3-88(M)
HSA	HSA/E8(M)
p53	EP9(R)
p53 Protein	BP53-12-1(M)
p53 Protein	DO7(M)
p53 Protein	1801(M)
LUNG	
ALK/p80	SP8(R)
ALK	SP144(R)
Calretinin	SP13(R)
Calretinin	2E7(M)
Calretinin	Polyclonal(R)
Carcinoembryonic Antigen (CEA)	B01-94-11M-P(M)
Carcinoembryonic Antigen (CEA)	CEA88(M)
Carcinoembryonic Antigen (CEA)	Polyclonal(R)
CD44 (Phagocytic Glycoprotein-1,HCAM)	DF1485(M)
CD66	BY114(M)
CDX-2	EP25(R)
Chromogranin A	LK2H10(M)
Chromogranin A	PHE-5(M)
Claudin-5	EP224(R)
Cytokeratin 5	EP24(R)
Cytokeratin 5	EP42(R)
Cytokeratin 6	EP67(R)
Cytokeratin 5&6	EP24 & EP67(R)
Cytokeratin 7	OV-TL12/30(M)
Cytokeratin 7 & 8	OV-TL12/30 & C51(M)
Cytokeratin 8 & 18	5D3(M)
Cytokeratin 19	RCK108(M)
Cytokeratin 20	EP23

Categories	Clone
Cytokeratin 20	IT-Ks20.8(M)
Cytokeratin Cocktail	AE1 and AE3(M)
Cytokeratin, High MW	34ßE12(M)
Cytokeratin, High MW (Basic)	AE3(M)
Cytokeratin, Low MW	AE1(M)
EGFR	Polyclonal(R)
Epithelial Membrane Antigen (EMA)	E29(M)
Epithelial Membrane Antigen (EMA)	Mc5(M)
Epithelial-Specific Antigen	MOC-31(M)
Fascin	FCN01(M)
Ki-67	K-2(M)
Ki-67 and Lambda Light Chain Cocktail	K-2(M) and Polyclonal (R)
Ki-67 Antigen,Proliferating Cell	MIB-1(M)
Ki-67 Antigen,Proliferating Cell	Ki88(M)
KRAS	Polyclonal(R)
Mast Cell Tryptase	AA1(M)
Mesothelin	5B2(M)
Napsin A	IP64(M)
Neuron Specific Enolase (NSE)	MIG-N3(M)
p21/WAF1	4D10(M)
p53	EP9(R)
p53 Protein	BP53-12-1(M)
p53 Protein	DO7(M)
p53 Protein	1801(M)
S100P	EP186(R)
Synaptophysin	Snp88(M)
VEGF	Polyclonal(R)
LYMPHOCYTE DISORDERS	
CD57 (Natural Killer Cell)	NK-1(M)
LYMPHOMA	
ALK/p80	SP8(R)
ALK	SP144(R)
Bcl-2α	SP66(R)
CD117	Polyclonal(R)
Cyclin D1	EP12(R)
CD117/c-Kit/SCF-Receptor	Polyclonal(R)
Epithelial Membrane Antigen (EMA)	E29(M)
Epithelial Membrane Antigen (EMA)	Mc5(M)
Ki-67 and Lambda Light Chain Cocktail	K-2(M) and Polyclonal(R)
Macrophage	LN5(M)
p34cdc2 (Cyclin Dependent Kinase)	POH-1(M)
Synaptophysin	Snp88(M)
ZAP-70	EP52(R)
LYMPHOMA (B PANEL)	
Bcl-2α	SP66(R)
B Cell	MB2(M)

Listing by Categories

Categories	Clone
B Lymphocyte Antigen 36 (BLA.36)	A27-42(M)
Bcl-2	EP36(R)
CD19	EP169(R)
CD20	CD20/C23(M)
CD20 (B Cell)	L-26(M)
CD21	SP186(R)
CD21	EP64(R)
CD21	B2(M)
CD22	FPC1(M)
CD23	Polyclonal(R)
CD38	SP149
CD45 (Leukocyte common Antigen,LCA)	LJ27.9(M)
CD45RA (B Cell)	MB1(M)
CD79a	SP18(R)
CD79a	EP82(R)
CD79a	11E 3(M)
CDw75 (B Cell)	LN1(M)
IgD	Polyclonal(R)
IgM	IgM88(M)
IgM	Polyclonal(R)
Kappa Light Chain	L1C1(M)
Kappa Light Chain	K88(M)
Lambda Light Chain	EP172(R)
Lambda Light Chain	Polyclonal(R)
Oct-2	EP115(R)
Mum/IRF4	SP114(R)
PAX-5	ZP007(M)
PU.1	EP18(R)
LYMPHOMA (T PANEL)	
CD1a	O10(M)
CD16a	SP189(R)
CD16a	SP175 (R)
CD2	AB75(M)
CD3 (T Cell)	UCHT1(M)
CD3 (T Cell)	PS1(M)
CD4	EP204(R)
CD4	4B12(M)
CD5	EP77(R)
CD5	4C7(M)
CD7	SP94(R)
CD7	LP15(M)
CD8	SP16(R)
CD8	1A5(M)
CD8	T8(M)
CD16	2H7(M)
CD43 (T Cell, Leukosialin)	DFT-1(M)
CD43	SP55(R)

Categories	Clone
CD45 (Leukocyte common Antigen,LCA)	LJ27.9(M)
CD45RC (T Cell)	MT2(M)
CD45RO (T Cell)	UCHL-1(M)
CD95	EP208(R)
CD99	EP8(R)
CD99	HO36.1.1(M)
CD103	EP206(R)
TIA-1	2G9A10F5(M)
VIP	Polyclonal(R)
LYMPHOMAS & LEUKEMIAS	
Bcl-2 Oncoprotein	Bcl-2/100(M)
Bcl-6	LN22(M)
CD10	56C6(M)
CD11b/ITAM	M01(M)
CD11b/ITAM	EP45(R)
CD11c	EP157(R)
CD14	EP128(R)
CD29	JB1a(M)
CD35	SP191(R)
CD35	RLB25(M)
CD43 & CD45RA Cocktail	MT1 &MB1(M)
CD45 (Leukocyte common Antigen,LCA)	PD7/26/16 & 2B11(M)
CD45 Cocktail (Leukocyte Antigen, LCA)	MEM55+LJ27.9 (M)
CD45RB	MEM55(M)
CD48	EP148(R)
CD68	KP1(M)
CD68	CD68/G2(M)
CD71 (Transferrin Receptor)	T9(M)
CD71 (Transferrin Receptor)	H68.4(M)
CD73	1D7(M)
CD74 (B Cell)	LN2(M)
CD40	CL1673(M)
CD90	EP56(R)
CD105	4G11(M)
CD117	T595(M)
CD205	EP176(R)
Cyclin D1	Polyclonal(R)
Oct-2	EP115(R)
J chain	SP105(R)
Terminal Deoxynucleotidyl Transferase (TdT)	EP266(R)
ZAP-70	ZAP70-C3(M)
MELANOMA	
CD63	EP211(R)
CD146	EP54®
Melan-A (MART-1)	A103(M)
Melanoma	HMB45(M)
Melanoma gp100	gp100/D5(M)

Categories	Clone
Melanoma-Associated Antigen	NKI/C3(M)
MiTF	MiTF/A13(M)
MMP-9	EP127(R)
S100 beta	EP32(R)
S100 Protein	Polyclonal(R)
S100 Protein	15E2E2(M)
SOX2	Polyclonal(R)
SOX2	EP103(R)
Tyrosinase	Ty/G5(M)
MERKEL CELL CARCINOMA	
E-Cadherin	36(M)
E-Cadherin	EP6(R)
MESOTHELIOMA	
CA 125	Ov185:1(M)
Cytokeratin 5	EP24(R)
Cytokeratin 5	EP42(R)
Cytokeratin 6	EP67(R)
Mesothelin	5B2(M)
MYOSARCOMA	
Actin, Muscle-Specific	HHF35(M)
Actin, Smooth Muscle	1A4(M)
Alpha-Actinin	JLN20(M)
Caldesmon HMW, Smooth muscle	h-CD(M)
Calponin	CALP(M)
Calponin-1	EP63(R)
Myosin Heavy Chains,Smooth Muscle	SMMS.1(M)
NEUROBIOLOGY (BRAIN PATHOLOGY)	
S100 beta	EP32(R)
S100 Protein	Polyclonal(R)
S100 Protein	15E2E2(M)
NEUROBLASTOMA	
CD38	SP149(R)
Chromogranin A	LK2H10(M)
Chromogranin A	PHE-5(M)
Neurofilament	NE-14(M)
Neuron Specific Enolase (NSE)	MIG-N3(M)
PGP9.5	3D9(M)
Synaptophysin	Snp88(M)
NEUROECTODESMAL TUMOR	
CD56 (Natural Killer Cell,NCAM)	NKH-1(M)
NEUROENDOCRINE POLYPEPTIDES (BRAIN PATHOLOGY)	
Glial Fibrillary Acidic Protein (GFAP)	GA-5(M)
Glial Fibrillary Acidic Protein (GFAP)	Polyclonal(R)
Substance P	Polyclonal(R)
Tau	Tau-2(M)
Tau	Tau-5(M)

Categories	Clone
NATURAL KILLER CELL PANEL	
CD56 (Natural Killer Cell,NCAM)	NKH-1(M)
CD57 (Natural Killer Cell)	NK-1(M)
OVARIAN MARKERS	
Alpha-Fetoprotein (AFP)	C3(M)
Bcl-2α	SP66(R)
Bcl-2	EP36(R)
Bcl-2 Oncoprotein	bcl-2/100(M)
CA19-9	C241:5:1:4(M)
CA 125	Ov185:1(M)
CD44 (Phagocytic Glycoprotein-1,HCAM)	DF1485(M)
CDX-2	CDX2-88(M)
Cytokeratin 5	EP24(R)
Cytokeratin 5	EP42(R)
Cytokeratin 7	OV-TL12/30(M)
Cytokeratin, High MW	34ßE12(M)
Cytokeratin, High MW (Basic)	AE3(M)
Cytokeratin, Low MW	AE1(M)
Fascin	FCN01(M)
PANCREATIC MARKERS	
CA19-9	C241:5:1:4(M)
Carcinoembryonic Antigen (CEA)	B01-94-11M-P(M)
Carcinoembryonic Antigen (CEA)	CEA88(M)
Carcinoembryonic Antigen (CEA)	Polyclonal(R)
CD56 (Natural Killer Cell,NCAM)	NKH-1(M)
Chromogranin A	LK2H10(M)
Cytokeratin 7	OV-TL12/30(M)
Cytokeratin 17	E27(M)
Cytokeratin 19	RCK108(M)
E-Cadherin	EP6(R)
E-Cadherin	36(M)
Fascin	FCN01(M)
Glucagon	Polyclonal(R)
Insulin	EP125(R)
Insulin	HB125(M)
KRAS	Polyclonal(R)
S100P	EP186(R)
Synaptophysin	Snp88(M)
PECOMA	
CD63	EP211(R)
PLACENTAL MARKERS	
Human Chorionic Gonadotropin (hCG) Beta	M94138(M)
PROLIFERATION-ASSOCIATED ANTIGENS	
Cyclin E1	EP126(R)
EGFR	Polyclonal(R)
Ki-67	K-2(M)
Ki-67 and Lambda Light Chain Cocktail	K-2(M) and Polyclonal (R)

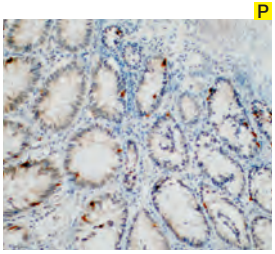
Listing by Categories

Categories	Clone
Ki-67 Antigen,Proliferating Cell	MIB-1(M)
Ki-67 Antigen,Proliferating Cell	Ki88(M)
MCM2	EP40(R)
Proliferating Cell Nuclear Antigen (PCNA)	PC10(M)
PROSTATE MARKERS	
Androgen Receptor	F39.4.1(M)
Bcl-2 Oncoprotein	bcl-2/100(M)
Bcl-2α	SP66(R)
Bcl-x	EP94(R)
CD38	SP149(R)
CD44 (Phagocytic Glycoprotein-1,HCAM)	DF1485(M)
Cytokeratin 5	EP24(R)
Cytokeratin 5	EP42(R)
Cytokeratin 14	EP61(R)
Cytokeratin 14	LL002(M)
Cytokeratin cocktail, Broad Spectrum	34ßE12/C51/AE1(M)
Cytokeratin, High MW	34ßE12(M)
Cytokeratin, High MW (Basic)	AE3(M)
Cytokeratin, Low MW	AE1(M)
ERG, Ets-Related Gene	EP111(R)
Mucin 2 (MUC2)	CCP58(M)
P504S (AMACR)	13H4(R)
P504S (AMACR)	RBT-AMACR(R)
PAP	A40010(M)
Prostate Specific Acid Phosphatase (PSAP)	B01-94-21M-NA(M)
Prostate Specific Antigen (PSA)	ErPr-8(M)
PSMA	EP192(R)
PSMA	SP29(R)
RHABOMYOSARCOMAS	
Myogenin	EP162(R)
RENAL CELL CARCINOMA MARKERS	
Cytokeratin, Low MW	AE1(M)
Renal Cell Carcinoma (RCC)	RCC-26(M)
SALIVARY DUCT CARCINOMA	
GCDFP-15	EP95(R)
Mucin 2 (MUC2)	CCP58(M)
SEX CORD STROMAL TUMORS	
Calretinin	SP13(R)
Calretinin	2E7(M)
Calretinin	Polyclonal(R)
Inhibin-Alpha	R1(M)
SIGNAL TRANSDUCTION PROTEIN	
CD5	4C7(M)
c-erbB-2	SP101(R)
c-erbB-2	SP3(R)
c-erbB-2 (HER-2/neu)	CB11(M)
c-erbB-2 (HER-2/neu)	EP3(R)

Categories	Clone
c-erbB-3 (HER-3)	RTJ1/A2(M)
EGFR	Polyclonal(R)
PTEN	SP218(R)
Platelet-Derived Growth Factor (PDGF)	PDGF88(M)
Platelet-Derived Growth Factor (PDGF)	Polyclonal(R)
ZAP-70	EP52(R)
ZAP-70	ZAP70-C3(M)
SKELETAL MUSCLE	
Desmin	D33(M)
Dystrophin	Dys1(Dy4/6D3)(M)
Dystrophin	Dys2(Dy8/6C5)(M)
Myoglobin	MG-1(M)
Myoglobin	Polyclonal(R)
Myosin,Skeletal Muscle	MY-32(M)
p34cdc2 (Cyclin Dependent Kinase)	POH-1(M)
Sarcomeric Actin	ZMSA-5(M)
Vimentin	V9(M)
Vimentin,Non-Hematopoietic	LN6(M)
SKIN (ADNEXAL TUMORS)	
Cytokeratin 15	EP14(R)
CD15 (Blood group antigen Lewis X)	BRA4F1(M)
Epithelial Membrane Antigen (EMA)	E29(M)
Epithelial Membrane Antigen (EMA)	Mc5(M)
SKIN (SPINDLE CELL TUMORS)	
Calponin-1	EP63(R)
CD31 (PECAM-1)	9G11(M)
CD34 (Endothelial Cell)	QBend/10(M)
Collagen IV	COL-94(M)
Cytokeratin 8&18	5D3(M)
Factor VIII-Related antigen	F8 2.2.9(M)
Factor XIII Subunit A	E980.1(M)
Glut-1	SPM498(M)
NGF Receptor	EP31(R)
SMALL CELL CARCINOMA OF LUNG	
CD56 (Natural Killer Cell,NCAM)	NKH-1(M)
SMALL, ROUND BLUE CELL TUMORS	
Calponin	CALP(M)
Calponin-1	EP63(R)
CD63	EP211(R)
CD68	KP1(M)
CD68	CD68/G2(M)
Myoglobin	MG-1(M)
Myoglobin	Polyclonal(R)
PGP9.5	3D9(M)
Vimentin	V9(M)
SOFT TISSUE SARCOMA	
CD34 (Endothelial Cell)	QBend/10(M)

Categories	Clone
SOFT TISSUE TUMOR	
Calretinin	SP13(R)
Calretinin	2E7(M)
Calretinin	Polyclonal(R)
Desmin	D33(M)
SPINDLE CELL TUMORS	
CD56 (Natural Killer Cell,NCAM)	NKH-1(M)
Desmin	D33(M)
PGP9.5	3D9(M)
STRESS RESPONSE PROTEIN	
Heat Shock Protein (HSP-70)	BRM-22(M)
Heat Shock Protein 27 (HSP 27)	G3.1(M)
THYROID MARKERS	
Cytokeratin 19	RCK108(M)
Cytokeratin, High MW	34ßE12(M)
Cytokeratin, High MW (Basic)	AE3(M)
Cytokeratin, Low MW	AE1(M)
p21/WAF1	4D10(M)
Thyroglobulin	2H11(M)
Thyroid Stimulating Hormone (TSH)	5404(M)
Thyroid Stimulating Hormone (TSH)	Polyclonal(R)
Thyroid Transcription Factor (TTF-1)	SP141
Thyroxine	D5(M)
TRANSITIONAL CELL CARCINOMA	
Cytokeratin, High MW (Basic)	AE3(M)
TUMOR SUPPRESSORS, APOPTOSIS PROTEINS & ONCOPROTEINS	
Bcl-2α	SP66(R)
Bcl-x	EP94(R)
BRCA1 Protein	Polyclonal(R)
c-Kit/CD117	EP10(R)
c-erbB-2 (HER-2/neu)	EP3(R)
c-myc Protein	9E 10(M)
CD3 (T Cell)	EP41 (R)
p27 (Kip1)	EP104(R)
NGF Receptor	EP31(R)
PTEN	SP218(R)
p53	EP9(R)
p53 Protein	BP53-12-1(M)
p53 Protein	DO7(M)
p53 Protein	1801(M)
PDCD4	EP102(R)
p27 (Kip1)	DCS72(M)
UROTHELIAL CARCINOMA	
S100P	EP186(R)
VASCULAR ENDOTHELIAL	
Aberrant Endothelial Cell	4A11(M)
Basic Fibroblast Growth Factor (bFGF)	bFGF88(M)

ABCC3



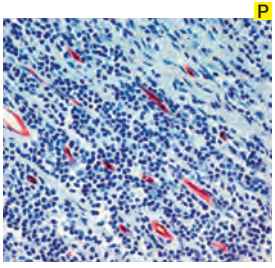
Colon stained with anti-Human ABCC3 using DAB chromogen

Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	ABCC3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 899-925 amino acids from the central region of human ABCC3.
Specificity:	Human ABCC3
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR800-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR800-10R**
Xmatrx®	**AW800-YCD, AW800-50D**
Concentrated:	**PU800-UP, PU800-5UP**
Recommended Positive Control:	**FG-800P**
Recommended Barrier Control:	**FB-800P**

ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MRP subfamily which is involved in multi-drug resistance. The specific function of this protein has not yet been determined; however, this protein may play a role in the transport of biliary and intestinal excretion of organic anions.

Aberrant Endothelial Cell



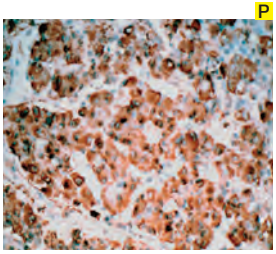
Tonsil stained with Anti-Aberrant Endothelial cell using AEC chromogen

Clone:	4A11
Isotype:	IgM
Source:	Mouse
Immunogen:	Human rheumatoid cells
Specificity:	Vascular endothelial cell Antigen
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM382-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM382-10M**
Xmatrx®	**AX382-YCD, AX382-50D**
Concentrated:	**MU382-UC, MU382-5UC**
Recommended Positive Control:	**FG-382M**
Recommended Barrier Control:	**FB-382M**

In an in vivo model of allergic contact dermatitis, 4A11 antigen was differentially upregulated from other endothelial markers such as E-selectin, vascular cell adhesion molecule-1, and intercellular adhesion molecule-1. Monoclonal antibody 4A11 reacts with the H-5-2 and Lewis Y-6 blood group glycolipids. This antibody reacts with vascular endothelial cells in lymphoid tissues and endothelial cells in diseased tissue such as rheumatoid and osteoarthritic synovium, psoriatic skin, adrenal tumors and cutaneous Kaposi's sarcomas. It does not react with several myeloid or lymphoid cell lines, peripheral blood cells and platelets. It does not detect endothelium of medium-sized vessels and that of normal tissues such as liver and spleen.

ACTH



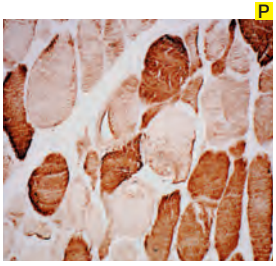
Pituitary tissue stained with Anti-ACTH using DAB chromogen

Clone:	AH26
Isotype:	IgG
Source:	Mouse
Immunogen:	A synthetic peptide corresponding to amino acids1-24 from the N-terminal of human ACTH
Specificity:	ACTH
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM487-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM487-10M**
Xmatrx®	**AX487-YCD, AX487-50D**
Concentrated:	**MU487-UC, MU487-5UC**
Recommended Positive Control:	**FG-487M**
Recommended Barrier Control:	**FB-487M**

Adrenocorticotropic hormone (ACTH or Corticotropin) is a polypeptide tropic hormone produced and secreted by the anterior pituitary gland. It is an important component of the hypothalamic-pituitary-adrenal axis and is often produced in response to biological stress (along with corticotrophin-releasing hormone from the hypothalamus). Its principal effects are increased production of androgens and as its name suggests, cortisol from the adrenal cortex. It labels corticotrophs in the adenohypophysis and is useful in the classification of pituitary adenomas.

Actin, Muscle-Specific



Heart muscle stained with Anti-Muscle Specific Actin using DAB chromogen

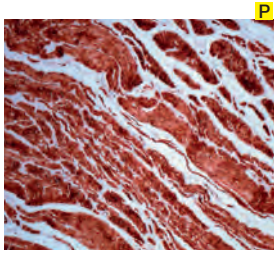
Clone:	HHF35
Isotype:	IgG1
Source:	Mouse
Immunogen:	Homogenized human myocardium
Specificity:	Muscle-specific Actin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM090-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM090-10M**
Xmatrx®	**AX090-YCD, AX090-50D**
Concentrated:	**MU090-UC, MU090-5UC**
Recommended Positive Control:	**FG-090M**
Recommended Barrier Control:	**FB-090M**

Actin, a major component of the cytoskeleton, is a globular protein about 5 nm in diameter and is composed of one polypeptide chain with a mass of approximately 47kD. This antibody recognizes alpha actin of skeletal, cardiac and smooth muscle cells and gamma actin from smooth muscle cells. It is non-reactive with other mesenchymal cells and all epithelial cells except for myoepithelium. It can be used to stain leiomyomas, leiomyosarcomas, rhabdomyomas and rhabdomyosarcomas. This antibody labels cytoplasm in skeletal, cardiac and smooth muscle cells.

Actin, Smooth Muscle

P



Stomach tissue stained with Anti-Smooth Muscle Actin using DAB chromogen

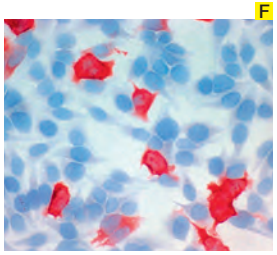
Clone:	1A4
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Synthetic NH2 terminal decapeptide of alpha smooth muscle actin coupled to keyhole limpet hemocyanin (KLH)
Specificity:	Alpha Smooth Muscle Actin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM128-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM128-10M**
Xmatrx®	**AX128-YCD, AX128-50D**
Concentrated:	**MU128-UC, MU128-5UC**
Recommended Positive Control:	**FG-128M**
Recommended Barrier Control:	**FB-128M**

Actin is one of the two major cytoskeletal proteins. The antibody can be used to identify smooth muscle tumors. It stains leiomyomas and leiomyosarcomas but does not stain carcinomas, melanomas, lymphomas or non-smooth muscle sarcomas. It stains the muscularis and muscularis mucosa of the gastrointestinal tract, the uterine myometrium, medial layer of blood vessels, the mesenchymal components of the prostate, and myoepithelial cells of salivary glands and other organs. The antibody does not stain striated muscle such as skeletal and cardiac muscle, endothelium, connective tissue, epithelium or nerve. This antibody stains positive in cytoplasm of smooth muscle cells.

Adenovirus

F



Adenovirus cell culture stained using AEC chromogen

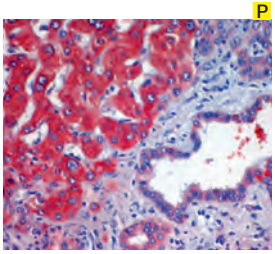
Clone:	A62020069P
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Adeno 3 strain
Specificity:	Adenovirus antigen/ immunogen in frozen tissue sections or infected cell culture.
Localization:	Nuclear
Pre-treatment:	None

Ready-to-Use (Manual):	**AM059-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM059-10ME**
Xmatrx®	**AX059-YCDE AX059-50DE**
Concentrated:	**MU059-UCE, MU059-5UCE**
Recommended Positive Control:	**FG-059ME**
Recommended Barrier Control:	**FB-059ME**

This antibody stains Adenovirus in the nucleus and cytoplasm of infected cells or tissues stained by immunohistochemical techniques.

Alpha-1-Antichymotrypsin

P



Liver stained with Anti-ACT using AEC chromogen

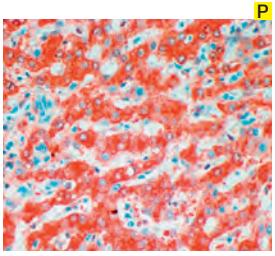
Clone:	α1A88
Isotype:	IgG1, Kappa
Source:	Mouse
Immunogen:	Biochemically purified alpha-1-antichymotrypsin protein was used to sensitize Balb/c (H-2d) mice
Specificity:	Alpha-1-Antichymotrypsin protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM388-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM388-10M**
Xmatrx®	**AX388-YCD, AX388-50D**
Concentrated:	**MU388-UC, MU388-5UC**
Recommended Positive Control:	**FG-388M**
Recommended Barrier Control:	**FB-388M**

Alpha-1-Antichymotrypsin (ACT) is a serine protease inhibitor. It forms a complex with serine protease, a prostate-specific antigen in human serum. ACT can be found in most cells of myeloid lineage and is, therefore, useful in the identification of neoplastic myeloid cells within extramedullary tissues such as acute myeloid leukemia. This enzyme is also localized in the spindle cells and round cells of true histiocytic lymphomas as well as in most thyroid papillary carcinomas. ACT is expressed in various normal and neoplastic cells. The mouse monoclonal antibody stains ACT protein in the cytoplasm of many different cells.

Alpha-1-Antitrypsin

P



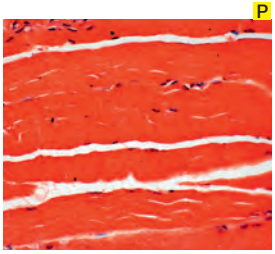
Liver tissue stained with Anti-alpha-1-Antitrypsin using AEC chromogen

Clone:	Polyclonal
Isotype:	N/A
Source:	Rabbit
Immunogen:	Human plasma
Specificity:	Alpha-1-Antitrypsin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR015-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR015-10R**
Xmatrx®	**AW015-YCD, AW015-50D**
Concentrated:	**PU015-UP, PU015-5UP**
Recommended Positive Control:	**FG-015P**
Recommended Barrier Control:	**FB-015P**

Alpha-1-Antitrypsin (AAT) is a 54 kD glycoprotein. Most of the anti-proteolytic enzyme activity of serum resides in this fraction. It is also found in lymph, mucus, saliva, synovial fluid, gastrointestinal tract secretions, semen, amniotic fluid and colostrum. It is a useful marker for benign and malignant hepatic neoplasms, endodermal sinus tumors, and for histiocytic differentiation in benign and malignant fibrous histiocytomas. This antibody has been absorbed with fractionated human plasma to remove contaminating antibodies. When tested by crossed immunoelectrophoresis against human plasma, a single precipitin line was observed.

Alpha-Actinin



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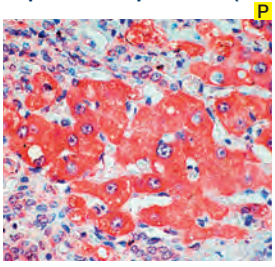
Muscle stained with Anti-alpha actinin using AEC chromogen

Clone:	JLN20
Isotype:	IgM
Source:	Mouse
Immunogen:	Alpha-actinin isolated from chicken gizzard
Specificity:	Alpha-Actinin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM097-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM097-10M**
Xmatrx®	**AX097-YCD, AX097-50D**
Concentrated:	**MU097-UC, MU097-5UC**
Recommended Positive Control:	**FG-097M**
Recommended Barrier Control:	**FB-097M**

Actinins are actin-binding proteins of 100 kD. Alpha-Actinin is an F-actin cross-linking protein thought to anchor actin to a variety of intracellular structures. Alpha-Actinin is found in stress fibers and adhesion plaques in non-muscle cells and in Z-discs and their homologues in muscle cells.

Alpha-Fetoprotein (AFP)



P

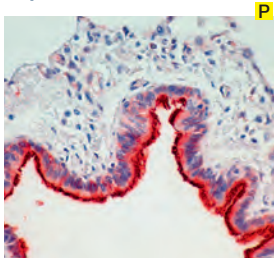
Hepatocellular carcinoma stained with Anti-AFP using AEC chromogen

Clone:	C3
Isotype:	IgG 2a
Source:	Mouse
Immunogen:	Affinity-purified human Alpha-Fetoprotein
Specificity:	Alpha-Fetoprotein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM008-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM008-10M**
Xmatrx®	**AX008-YCD, AX008-50D**
Concentrated:	**MU008A-UC, MU008A-5UC**
Recommended Positive Control:	**FG-008M**
Recommended Barrier Control:	**FB-008M**

Alpha-Fetoprotein (AFP) is a 64 kD tumor-associated embryonal antigen produced by fetal liver, hepatoma, yolk sac, and several germ cell tumors of testicular and ovarian origin. Of the germ cell tumors, only embryonal carcinoma and endodermal sinus tumors stain positive for AFP and not teratomas. The positive results are useful in distinguishing embryonal carcinoma from seminoma. AFP is present in the mononuclear embryonal carcinoma cell and in the intracellular or extracellular hyaline droplets. This antibody stains positive for alpha fetoprotein in the cytoplasm of positive cells.

Alpha-Tubulin



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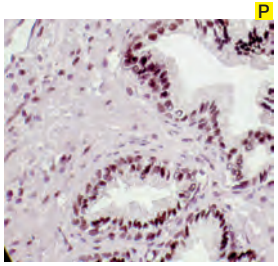
Lung tissue stained with Anti-Alpha-Tubulin using AEC chromogen

Clone:	DM-1A
Isotype:	IgG1
Source:	Mouse
Immunogen:	Alpha-Tubulin isolated from chick brain microtubules
Specificity:	Alpha-Tubulin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM121-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM121-10M**
Xmatrx®	**AX121-YCD, AX121-50D**
Concentrated:	**MU121-UC, MU121-5UC**
Recommended Positive Control:	**FG-121M**
Recommended Barrier Control:	**FB-121M**

Microtubules, along with microfilaments and intermediate filaments, form the major part of the extensive cytoplasmic network known as the cytoskeleton. The thickest of these filaments are the 20-25 nm microtubules composed of tubulin and several additional microtubule-associated proteins (MAP). Tubulin is a heterodimer composed of α-tubulin and β-tubulin. Each subunit is a 55 kD acidic protein. Tubulin assembles into the microtubule system during interphase, then reassembles into the mitotic spindle during cell division. This antibody reacts specifically with the alpha subunit of tubulin in cultured chicken fibroblasts, human, bovine, murine, and amphibian cells, and also in yeast and fungi.

Androgen Receptor



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Prostate Hyperplasia showing nuclear Androgen Receptor positivity using DAB chromogen

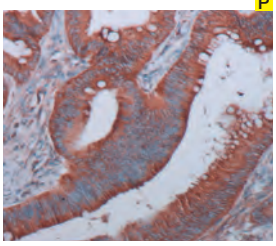
Clone:	F39.4.1
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Synthetic peptide sequence comprising amino acids 301-320 of human androgen receptor (SP61).
Specificity:	Androgen Receptor antigen
Localization:	Nuclear&cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM256-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM256-10ME**
Xmatrx®	**AX256-YCDE, AX256-50DE**
Concentrated:	**MU256-UCE, MU256-5UCE**
Recommended Positive Control:	**FG-256ME**
Recommended Barrier Control:	**FB-256ME**

This monoclonal antibody is specifically designed to recognize a unique immunogenic N-terminal transactivation domain of the androgen receptor that has a low degree of homology with other steroid receptors. This antibody binds to synthetic peptide SP61 of human androgen receptor. This antibody does not cross-react with human estrogen, progesterone or glucocorticoid receptor.

ALK/p80

P



Lung stained with anti-Human ALK/ p80 using DAB chromogen

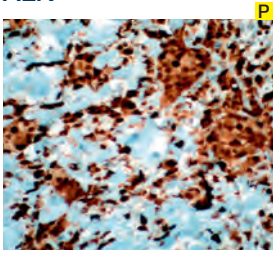
Clone:	SP8
Isotype:	IgG
Source:	Rabbit
Immunogen:	Recombinant protein corresponding to a region which spans the tyrosine kinase catalytic domain and part of the C-terminus of the NPM-ALK transcript
Specificity:	Human ALK/p80
Localization:	Cytoplasmic and nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN770-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN770-10M**
Xmatrx®	**AY770-YCD, AY770-50D**
Concentrated:	**NU770-UC, NU770-5UC**
Recommended Positive Control:	**FG-770N**
Recommended Barrier Control:	**FB-770N**

This antibody recognizes a human p80 protein, identified as a hybrid of the anaplastic lymphoma kinase (ALK) gene and the nucleophosmin (NPM) gene resulting from the t(2;5)(p23;q35) translocation found in a third of large cell lymphomas. This antibody can be used to detect p80 in these lymphomas and may also be used to detect a recently described subtype of large B cell lymphoma, which expresses the full-length ALK protein.

ALK

P



Anaplastic lymphoma stained with anti-Human ALKusing DAB chromogen

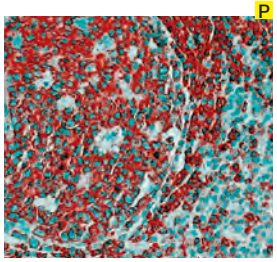
Clone:	SP144
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from the internal region of human ALK protein
Specificity:	Human ALK
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN874-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN874-10M**
Xmatrx®	**AY874-YCD, AY874-50D**
Concentrated:	**NU874-UC, NU874-5UC**
Recommended Positive Control:	**FG-874N**
Recommended Barrier Control:	**FB-874N**

Anaplastic lymphoma kinase is a receptor tyrosine kinase. Chromosomal translocations involving ALK have been found to be associated with different diseases such as anaplastic large cell lymphomas (ALCLs) and non small-cell lung cancer (NSCLC). The constitutively active fusion proteins are responsible for most of anaplastic large cell non-Hodgkin's lymphomas. The EML4-ALK fusion gene is responsible for approximately 3-5% of NSCLC. EML4-ALK-rearrangement in NSCLC is exclusive and not found in EGFR- or KRAS-mutated tumors.

B Cell

P



Tonsil tissue stained with Anti-B cell using Fast Red Chromogen

Clone:	MB2
Isotype:	IgG1
Source:	Mouse
Immunogen:	Hodgkin's lymphoma cell line DEV
Specificity:	MB2
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM158-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM158-10M**
Xmatrx®	**AX158-YCD, AX158-50D**
Concentrated:	**MU158-UC, MU158-5UC**
Recommended Positive Control:	**FG-158M**
Recommended Barrier Control:	**FB-158M**

MB2 reacts with a cytoplasmic antigen present in all B cells with the exception of plasma cells. It also reacts with endothelial cells and various types of epithelial cells. MB2 shows no reaction with T lymphocytes or thymocytes. A faint staining may occur when using frozen sections containing T cells. MB2 is not suitable for immunolabeling of living or unfixed cells.

B Lymphocyte Antigen 36 (BLA.36)

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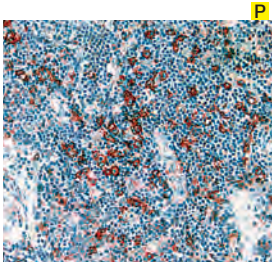


Hodgkin stained with Anti-BLA.36 using DAB chromogen

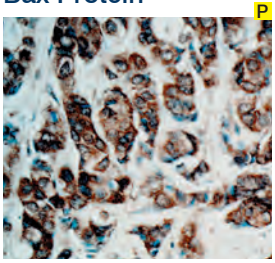
Clone:	A27-42
Isotype:	IgG3
Source:	Mouse
Immunogen:	Hodgkin's cell line HDLM-3
Specificity:	BLA.36 antigen
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM231-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM231-10M**
Xmatrx®	**AX231-YCD, AX231-50D**
Concentrated:	**MU231-UC, MU231-5UC**
Recommended Positive Control:	**FG-231M**
Recommended Barrier Control:	**FB-231M**

BLA.36 is a developmentally regulated 36 kD antigen expressed on the plasma membrane of B lymphocytes, Reed-Sternberg, and mononuclear Hodgkin's cells. The anti-BLA.36 antibody recognizes all four subtypes of Hodgkin's disease. It also gives strong staining of B cell lymphomas including follicular center cell lymphomas (large and small cell types), mantle zone lymphomas, and immunoblastic lymphomas. No reactivity of anti-BLA.36 is found in normal epithelial cells, including adrenal gland, breast, colon, lung, salivary gland, skin, stomach and their malignant counterparts. Anti-BLA.36 can be used to distinguish Reed-Sternberg cells and some B-cell lymphomas from other malignant cells.

Bax Protein

P



Breast carcinoma stained with Anti-Bax Protein using DAB chromogen

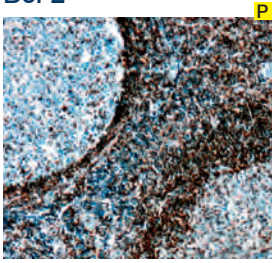
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	A synthetic peptide encompassing a unique epitope at the amino terminus of human Bax protein coupled to Keyhole Limpet Hemocyanin (KLH)
Specificity:	Bax protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR347-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR347-10R**
Xmatrx®	**AW347-YCD, AW347-50D**
Concentrated:	**PU347-UP, PU347-5UP**
Recommended Positive Control:	**FG-347P**
Recommended Barrier Control:	**FB-347P**

Bax protein is identified as a promoter of apoptosis. The override of apoptotic control is suspected to cause or contribute to some forms of carcinogenesis. This antibody will detect the α, ß , and d isoforms of Bax protein.

Bcl-2

P



Tonsil stained with Anti-Bcl 2 using DAB chromogen

Clone:	EP36
Isotype:	IgG1
Source:	Rabbit
Immunogen:	BCl-2
Specificity:	BCl-2
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1 elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN723-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN723-10M**
Xmatrx®	**AY723-YCD, AY723-50D**
Concentrated:	**NU723-UC, NU723-5UC**
Recommended Positive Control:	**FG-723N**
Recommended Barrier Control:	**FB-723N**

Bcl-2 (B-cell lymphoma 2), encoded in humans by the Bcl-2 gene, is the founding member of the Bcl-2 family of regulator proteins that regulate cell death, by either inducing it (pro-apoptotic) it or inhibiting it (anti-apoptotic). Bcl-2 is specifically considered as an important anti-apoptotic protein and is thus classified as an oncogene. Over expression of Bcl-2 has been shown to promote cell survival by suppressing apoptosis. It has been documented that Bcl-2 becomes deregulated in tumor cells as a result of translocation into the immunoglobulin heavy-chain locus and is therefore activated in B cell malignancies. Bcl-2 is useful in differentiation of follicular lymphoma from reactive follicular proliferation (Bcl-2 negative). In addition, Bcl-2 has been shown to be correlated with disease prognosis in breast cancer, prostate and ovarian cancer.

Bcl-2 Alpha

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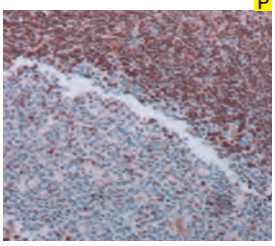

Tonsil stained with anti-Human Bcl-2 Alphausing DAB chromogen

Clone:	SP66
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to N-terminus of human Bcl-2 Alpha
Specificity:	Human Bcl-2 Alpha
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN758-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN758-10M**
Xmatrx®	**AY758-YCD, AY758-50D**
Concentrated:	**NU758-UC, NU758-5UC**
Recommended Positive Control:	**FG-758N**
Recommended Barrier Control:	**FB-758N**

Expression of Bcl-2 alpha oncoprotein inhibits the programmed cell death (apoptosis). In most follicular lymphomas, neoplastic germinal centers express high levels of Bcl-2 alpha protein, whereas the normal or hyperplastic germinal centers are negative. Bcl-2 is useful in differentiation of follicular lymphoma from reactive follicular proliferation (Bcl-2 negative). In addition, Bcl-2 has been shown to be correlated with disease prognosis in breast cancer, prostate cancer and ovarian cancer.

Bcl-2 Oncoprotein

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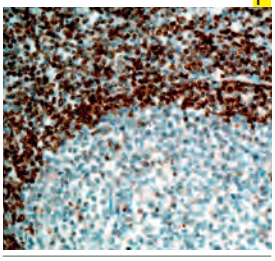


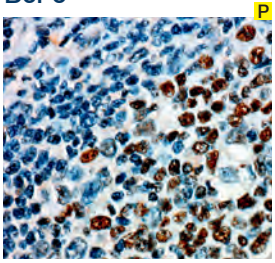
Tonsil tissue stained with Anti-Bcl-2 using DAB chromogen

Clone:	bcl-2/100
Isotype:	IgG1 kappa
Source:	Mouse
Immunogen:	Synthetic peptide comprising residues 41-54 of Bcl-2 oncoprotein-3
Specificity:	Bcl-2 protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM287-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM287-10M**
Xmatrx®	**AX287-YCD, AX287-50D**
Recommended Positive Control:	**FG-287M**
Recommended Barrier Control:	**FB-287M**

The Bcl-2 is an integral inner mitochondrial membrane protein and is frequently overexpressed in many lymphoid malignancies. Immunohistologic studies have demonstrated that staining for Bcl-2 protein can be used to distinguish neoplastic germinal centers from reactive ones.

Bcl-6



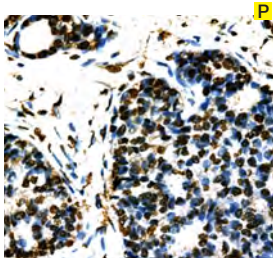
Tonsil stained with Anti-Bcl-6 using DAB chromogen

Clone:	LN22
Isotype :	IgG
Source:	Mouse
Immunogen:	Bcl-6
Specificity:	Bcl-6
Localization:	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM708-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM708-10M**
Xmatrx®	**AX708-YCD, AX708-50D**
Concentrated:	**MU708-UC, MU708-5UC**
Recommended Positive Control:	**FG-708M**
Recommended Barrier Control:	**FB-708M**

Anti-Bcl-6 is a transcriptional regulator gene which codes for a 706 amino acid nuclear zinc finger protein. This antibody reacts with Bcl-6 gene product in follicular lymphomas, diffuse large B-cell lymphomas, Burkitt's lymphomas and in nodular lymphocyte predominant Hodgkin's disease. The antibody gives a strong nuclear labeling of Bcl-6 protein in follicular lymphomas, diffuse large B-cell lymphomas, Burkitt's lymphomas and nodular, lymphocyte predominant Hodgkin's disease. Bcl-6 is not expressed in B-CLL, hairy cell leukemia, mantle and marginal-zone derived lymphomas.

BCR-ABL



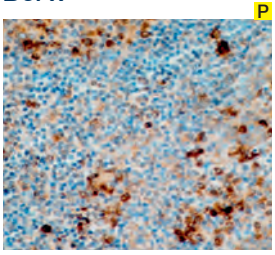
Liver cancer stained with Anti-BCR-ABL using DAB chromogen

Clone:	7C6
Isotype:	IgG
Source:	Mouse
Immunogen:	Bcr686 thyroglobulin conjugate corresponding to human BCR sequence 686-696 (SSINEEITPRRQS)
Specificity:	Human and mouse BCR-ABL
Localization:	Nucleus
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM903-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM903-10ME**
Xmatrx®	**AX903-YCDE, AX903-50DE**
Concentrated:	**MU903-UCE, MU903-5UCE MU903-1UCE**
Recommended Positive Control:	**FG-903M**
Recommended Barrier Control:	**FB-903M**

Translocation between chromosomes 9 and 22 lead to the formation of the Philadelphia chromosome which contain the BCR-ABL fusion gene found in most patients with Chronic Myeloid Leukemia (CML) and some patients with Acute Lymphoblastic leukemia (ALL) or Acute Myelogenous Leukemia (AML). The BCR-ABL oncoprotein which exhibits constitutively activated tyrosine kinase function is responsible for the pathogenesis of CML. BCR-ABL aberrantly activates multiple signal pathways involving leukemic cell proliferation and survival. Besides GRB2 coupled RAS-MAPK and PI3K/AKT signal pathways, BCR-ABL also activates STAT5 and CRKL signal molecules.

Bcl-x



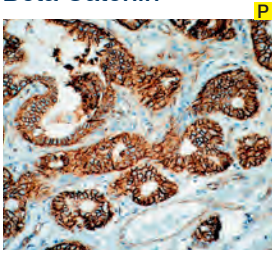
Tonsil tissue stained with anti-Human Bcl-xusing DAB chromogen

Clone:	EP94
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human Bcl-x protein
Specificity:	Human Bcl-x
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN819-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN819-10M**
Xmatrx®	**AY819-YCD, AY819-50D**
Concentrated:	**NU819-UC, NU819-5UC**
Recommended Positive Control:	**FG-819N**
Recommended Barrier Control:	**FB-819N**

Bcl-X, or bcl-2-like 1 protein, a member of the bcl-2 protein family, inhibits cell death or apoptosis and functions as a regulator of apoptosis. Bcl-X has two isoforms: Bcl-XL (Long), a 241-amino acid protein; and Bcl-XS (Short), a 178-amino acid protein lacking a 63-amino acid domain that is well conserved among members of the bcl-2 family. Bcl-X is typically present in the cytosol in association with the mitochondrial membrane.Bcl-x is expressed in many types of cell including lymphocytes, neuronal cells, and epithelial cells. In tumors, a high level of Bcl-x has been found in Reed Sternberg cells in Hodgkin's disease. Overexpression of Bcl-x has been observed in primary central nervous system lymphomas that occur in immuno suppressed patients. In prostate cancer, Bcl-x expression is increased during tumor progression. Overexpression of Bcl-x in colon cancer has been linked to a poor prognosis.

Beta Catenin



Breast stained with anti-Human Beta Catenin using DAB chromogen

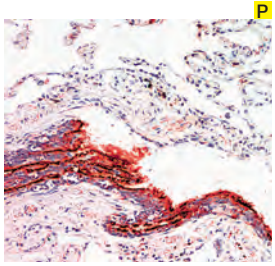
Clone:	EP35
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic phospho-peptide corresponding to residues near N-terminus of human Beta Catenin protein
Specificity:	Human Beta Catenin
Localization:	Nuclear and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN778-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN778-10M**
Xmatrx®	**AY778-YCD, AY778-50D**
Concentrated:	**NU778-UC, NU778-5UC**
Recommended Positive Control:	**FG-778N**
Recommended Barrier Control:	**FB-778N**

Beta-Catenin is a key regulatory protein involved in cell adhesion and signal transduction through the Wnt pathway, and plays important roles in development, cellular proliferation, and differentiation. Mutations of this gene are commonly found in a variety of cancers: in primary hepatocellular carcinoma, colorectal cancer, ovarial carcinoma, breast cancer, lung cancer and glioblastoma. Mutations in the Beta-Catenin gene CTNNB1 leading to stabilization of Beta-Catenin in the cytoplasm and translocation to the nucleus have been implicated in various forms of tumor including familial adenomatous polyposis, fibromatosis, solitary fibrous tumors and endometrial carcinoma. A nuclear accumulation of Beta-Catenin in fibromatosis (desmoid tumor) in various locations including breast and mesentery is useful in the differentiation of this tumor from other fibroblast like lesions.

Beta-Tubulin

P



Lung tissue stained with Anti-Beta Tubulin using AEC chromogen

Clone:	DM-1B
Isotype:	IgG1 kappa
Source:	Mouse
Immunogen:	Beta-tubulin isolated from chick brain microtubules
Specificity:	Beta-Tubulin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM122-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM122-10M**
Xmatrx®	**AX122-YCD, AX122-50D**
Concentrated:	**MU122-UC, MU122-5UC**
Recommended Positive Control:	**FG-122M**
Recommended Barrier Control:	**FB-122M**

Microtubules, along with microfilaments and intermediate filaments, form the major part of the extensive cytoplasmic network known as the cytoskeleton. The thickest of these filaments are the 20-25 nm microtubules composed of tubulin and several additional microtubule-associated proteins (MAP). Tubulin is a heterodimer composed of α-tubulin and ß-tubulin. Each subunit is a 55 kD acidic protein. Tubulin assembles into the microtubule system during interphase, then reassembles into the mitotic spindle during cell division. Immunoblot analysis shows that this antibody binds to the beta subunit of tubulin from cultured fibroblasts and chick brain tubulin. This antibody labels the cytoplasmic network of microtubules and mitotic spindles of cultured cells.

Beta-Tubulin II

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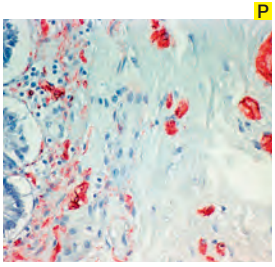

Colon stained with Anti-Beta Tubulin II using AEC chromogen

Clone:	JDR3B8
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Cys-Glu-Gly-Glu-Glu-Asp-Glu-Ala-OH synthetic peptide conjugated with BSA.
Specificity:	ß-Tubulin II
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM176-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM176-10M**
Xmatrx®	**AX176-YCD, AX176-50D**
Concentrated:	**MU176-UC, MU176-5UC**
Recommended Positive Control:	**FG-176M**
Recommended Barrier Control:	**FB-176M**

Microtubules play critical roles in a variety of cellular processes, such as mitosis, intracellular transport, ciliary and flagellar motility, and maintenance of cell shape. The structural subunit of microtubules, the 100 kD protein tubulin, is a heterodimer of two 50 kD subunits designated alpha and beta. Both alpha and beta occur as numerous isotypes which differ from each other in their amino acid sequences and tissue distribution. The majority of the differences among the isotypes cluster in the C-terminal, a region where the microtubule-associated proteins (MAPs) bind to tubulin. This antibody stains ß-tubulin in cytoplasm of neuroepithelial cells and other positive cells.

Beta-Tubulin III

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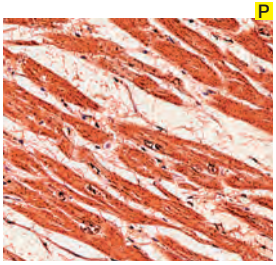

Heart muscle stained with Anti-Beta Tubulin III using DAB chromogen

Clone:	SDL3D10
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Cys-Glu-Ser-Glu-Ser-Glu-Gln-Gly-Pro-Lys-OH synthetic peptide conjugated with BSA.
Specificity:	ß-Tubulin III
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM177-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM177-10M**
Xmatrx®	**AX177-YCD, AX177-50D**
Concentrated:	**MU177-UC, MU177-5UC**
Recommended Positive Control:	**FG-177M**
Recommended Barrier Control:	**FB-177M**

Microtubules play critical roles in a variety of cellular processes, such as mitosis, intracellular transport, ciliary and flagellar motility, and maintenance of cell shape. The structural subunit of microtubules, the 100 kD protein tubulin, is a heterodimer of two 50 kD subunits designated alpha and beta. Both alpha and beta occur as numerous isotypes which differ from each other in their amino acid sequences and tissue distribution. The majority of the differences among the isotypes cluster in the C-terminal, a region where the microtubule-associated proteins (MAPs) bind to tubulin. This antibody stains beta tubulin in cytoplasm of positive cells.

Beta-Tubulin IV

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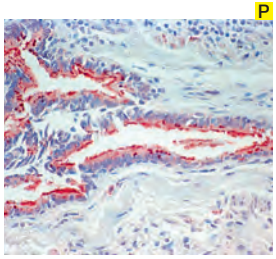

Lung stained with Anti-Beta Tubulin IV using AEC chromogen

Clone:	ONS1A6
Isotype:	IgG1
Source:	Mouse
Immunogen:	Cys-Glu-Ala-Glu-Glu-Glu-Val-Ala-OH synthetic peptide conjugated with BSA 1
Specificity:	ß-Tubulin IV
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM178-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM178-10M**
Xmatrx®	**AX178-YCD, AX178-50D**
Concentrated:	**MU178-UC, MU178-5UC**
Recommended Positive Control:	**FG-178M**
Recommended Barrier Control:	**FB-178M**

Microtubules play critical roles in a variety of cellular processes, such as mitosis, intracellular transport, ciliary and flagellar motility, and maintenance of cell shape. In the structural subunit of microtubules, the 100 kD protein tubulin, is a heterodimer of two 50 kD subunits designated alpha and beta. Both alpha and beta occur as numerous isotypes which differ from each other in their amino acid sequences and tissue distribution. The majority of the differences among the isotypes cluster in the C-terminal, a region where the microtubule-associated proteins (MAPs) bind to tubulin. This antibody stains ß-tubulin in cytoplasm of positive cells.

bFGF (Basic Fibroblast Growth Factor)

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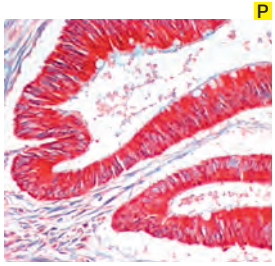

Adenocarcinoma stained with Anti-bFGF using AEC chromogen

Clone:	bFGF88
Isotype:	IgG 2b
Source:	Mouse
Immunogen:	A unique synthetic peptide of bFGF coupled to keyhole limpet hemocyanin
Specificity:	bFGF
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM359-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM359-10M**
Xmatrx®	**AX359-YCD, AX359-50D**
Recommended Positive Control:	**FG-359M**
Recommended Barrier Control:	**FB-359M**

bFGF is a pro-angiogenic cytokine which is present in diverse tissues. It is known to function as an autocrine mediator of mitogenesis of endothelial cells in vivo, resulting in angiogenesis. It also increases fibroblast production of plasminogen activator and collagenase. bFGF is a heparin binding cytokine that is found inside cells and in extracellular stores bound to heparin or heparin sulfate proteoglycans. bFGF may be released to mediate tissue repair since expression is known to be high in mast cells responding to injury. The monoclonal antibody to bFGF can be used for the study of myometrial smooth muscle cells, uterine leiomyomas, cardiac myocytes, arterial endothelium, gastric carcinoma, and invasive or metastatic melanoma. This antibody stains bFGF in cytoplasm of many diverse cell types.

Blood Group Antigen Lewis A

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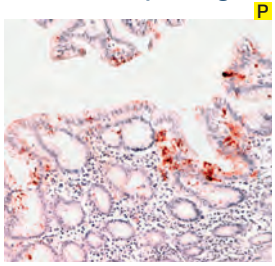

Stomach tissue stained with Anti-Blood group antigen Lewis A using AEC chromogen

Clone:	7LE
Isotype:	IgG1
Source:	Mouse
Immunogen:	Mucin isolated from ovarian cyst fluid
Specificity:	Blood Group Antigen Lewis A
Localization:	Cytoplasm and Membrane
Pre-treatment:	-
Manual/i6000:	None
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM303-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM303-10M**
Xmatrx®	**AX303-YCD, AX303-50D**
Concentrated:	**MU303-UC, MU303-5UC**
Recommended Positive Control:	**FG-303M**
Recommended Barrier Control:	**FB-303M**

Lewis blood group antigens are carbohydrate moieties structurally integrated in mucous secretions. Lewis antigen system alterations have been described in gastric carcinoma and associated lesions. Enhanced expression of Lewis A antigen has been found in malignant transformation of gastric tissues. A panel of antibodies to Lewis antigens, including Lewis A, Lewis B and sialylated Lewis A, is useful in the immunopathological analysis of gastric cancers. Clone 7LE detects Lewis A antigen in cultured cells and tissue sections by immunohistochemistry and reacts with the immunogen in ELISA assays. This antibody stains blood group antigen Lewis A.

Blood Group Antigen Lewis B

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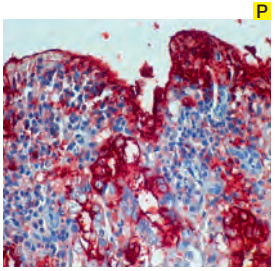


Intestine stained with Anti-Blood group Lewis B antibody using AEC chromogen

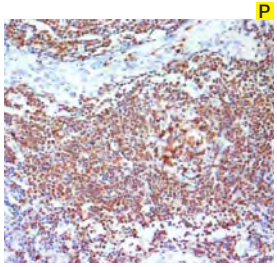
Clone:	2-25LE
Isotype:	IgG1
Source:	Mouse
Immunogen:	Mucin isolated from ovarian cyst fluid
Specificity:	Blood Group Antigen Lewis B
Localization:	Cytoplasm and Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM304-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM304-10M**
Xmatrx®	**AX304-YCD, AX304-50D**
Concentrated:	**MU304-UC, MU304-5UC**
Recommended Positive Control:	**FG-304M**
Recommended Barrier Control:	**FB-304M**

Lewis blood group antigens are carbohydrate moieties structurally integrated in mucous secretions. Lewis antigen system alterations have been described in gastric carcinoma and associated lesions. Anomalous expression of Lewis B antigen has been found in some non-secretory gastric carcinomas and colorectal cancers. This antibody will stain Lewis B antigen in formalin-fixed, paraffin-embedded tissues. A panel of antibodies to Lewis antigens, including Lewis A, Lewis B and sialylated Lewis A, is useful in the immunopathological analysis of gastric cancers. Monoclonal antibody 2-25LE detects Lewis B antigen in cultured cells and tissue sections using immunohistochemistry and will react with the immunogen in ELISA assays. This antibody stains blood group antigen Lewis B.

BOB-1

P



Lymph node stained with BOB-1

Clone:	SP92
Isotype:	IgG
Source:	Rabbit
Immunogen:	-
Specificity:	BOB-1
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN957-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN957-10ME**
Xmatrx®	**AY957-50DE, AY957-YCDE**
Concentrated:	**NU957-UCE, NU957-5UCE**
Recommended Positive Control:	**FG-957NE**
Recommended Barrier Control:	**FB-957NE**

The BOB-1 / OBF-1 / OCA-B protein is a B cell-specific co-activator of the Oct1 and Oct2 transcription factors. BOB-1 facilitates transactivation of immunoglobulins and other B-cell specific genes through the binding and activation of the transcription factors Oct-1 and Oct-2. Expression of BOB-1/OBF-1 is restricted largely to mature B-cells. In pathological conditions such as classical Hodgkin's disease, loss of BOB-1 expression is thought, in part, to contribute to the defect in immunoglobulin gene expression by Hodgkin and Reed Sternberg cells. Expression of BOB.1/OBF.1 has been reported in follicular center cell lymphoma, diffuse large B-cell lymphoma and some cases of acute myeloid leukemia. B-CLL, marginal zone lymphoma and mantle cell lymphoma may show weak to moderate immunoreactivity.

BRCA1 Protein

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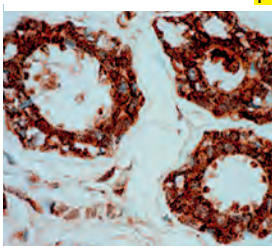

Anti-BRCA1 positivity in recurrent tumor using DAB chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	A synthetic peptide encompassing a unique epitope within the carboxyl terminal domain of human BRCA1 coupled to Keyhole Limpet Hemocyanin.
Specificity:	BRCA1
Localization:	Nucleus and Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR345-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR345-10R**
Xmatrx®	**AW345-YCD, AW345-50D**
Concentrated:	**PU345-UP, PU345-5UP**
Recommended Positive Control:	**FG-345P**
Recommended Barrier Control:	**FB-345P**

The BRCA1 gene was discovered as a region on chromosome 17q21 that has a high frequency of mutation in families predisposed to breast cancer. Specific mutations and variability in expression have been identified and characterized, including the founder mutation 185delAG in Askenazi Jewish families. BRCA1 functions as a tumor suppressor by mechanisms not yet understood. It has recently been suggested that BRCA1 might induce apoptosis similar to the gatekeeper function of the p53 tumor suppressor. This antibody reacts with an epitope mapping near the carboxyl terminus of the normal (non-mutant) BRCA1 gene product.

Breast Cancer Antigen BCA-225

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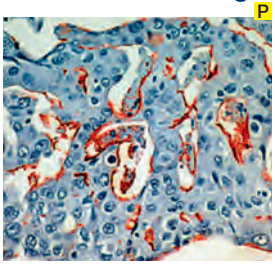

Breast carcinoma stained with Anti-BCA-225 using AEC chromogen

Clone:	CU18
Isotype:	IgG1
Source:	Mouse
Immunogen:	RNA virus-like particles from T47D breast carcinoma cell line (VR).
Specificity:	Breast carcinoma Associated Antigen (BCA-225)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM135-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM135-10M**
Xmatrx®	**AX135-YCD, AX135-50D**
Recommended Positive Control:	**FG-135M**
Recommended Barrier Control:	**FB-135M**

This antibody recognizes a 225-250 kD glycoprotein found in most human breast carcinomas and a few other tissues. CU18 does not stain lactating mammary gland.

CA19-9

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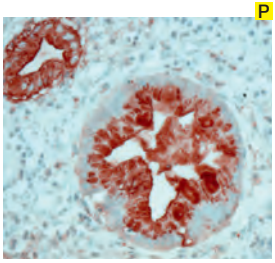

Colon stained with Anti-CA19-9 using DAB chromogen

Clone:	C241:5:1:4
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human colorectal adeno carcinoma cell line COLO205
Specificity:	CA19-9 protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM424-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM424-10M**
Xmatrx®	**AX424-YCD, AX424-50D**
Concentrated:	**MU424-UC, MU424-5UC**
Recommended Positive Control:	**FG-424M**
Recommended Barrier Control:	**FB-424M**

Carcinoma Antigen 19-9 (CA19-9) is a carbohydrate antigen that reacts specifically with Sialyl Lewis-containing glycolipids and has been isolated and characterized as the oligosaccharide sialylazed lacto-N-fucopentose II antigen. This monoclonal antibody is directed against the CA19-9 antigen, which is expressed in pancreatic carcinomas, and hepatobillary carcinomas, the tumor cells of colorectal and gastric cancers. It can also be found in chronic pancreatitis and in healthy colonic mucosa of patients with colorectal cancer.

CA 125 (Ovarian Tumor Marker)

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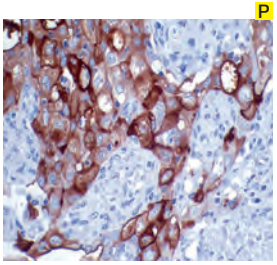


Ovarian carcinoma stained with Anti-Ovarian Tumor Marker (CA125) using DAB chromogen

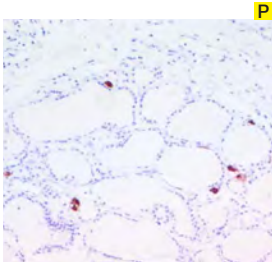
Clone:	Ov185:1
Isotype:	IgG1
Source:	Mouse
Immunogen:	A partially purified mucin fraction from a pool of cancer tissues from patients with epithelial ovarian cancer.
Specificity:	Repetitive protein determinant expressed in the protein core of CA125 human ovarian cancer antigen.
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM429-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM429-10M**
Xmatrx®	**AX429-YCD, AX429-50D**
Concentrated:	**MU429-UC, MU429-5UC**
Recommended Positive Control:	**FG-429M**
Recommended Barrier Control:	**FB-429M**

Monoclonal antibody Ov185:1 reacts with repetitive protein determinant expressed in the protein core of the CA125 human ovarian cancer antigen. This marker is usually associated with ovarian epithelial malignancies. Immunohistochemistry with CA125 antibody in conjunction with other markers was found to be useful in tracing the origin of adeno carcinoma of unknown origin. This antibody stains membrane in ovarian cancer cells.

Calcitonin

P



Thyroid stained with Calcitonin

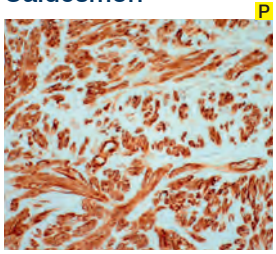
Clone:	SP17
Isotype:	IgG
Source:	Rabbit
Immunogen:	-
Specificity:	Calcitonin
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN926-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN926-10M**
Xmatrx®	**AY926-50D, AY926-YCD**
Concentrated:	**NU926-UC, NU926-5UC**
Recommended Positive Control:	**FG-926NE**
Recommended Barrier Control:	**FB-926NE**

Calcitonin (CT) is a polypeptide hormone with 32 amino acids synthesized primarily by the thyroid. CT is able to decrease blood calcium levels by direct inhibition of mediated bone resorption and by enhancing calcium excretion by the kidney. Immunohistochemical staining with anti-calcitonin antibody has proven to be an effective way of demonstrating calcitonin-producing cells in the thyroid. C-cell hyperplasia and medullary thyroid carcinomas stain positive for calcitonin. Studies of calcitonin have resulted in the identification of a wide spectrum of C-cell proliferative abnormalities.

Caldesmon

P



Leiomyoma stained with anti-Human Caldesmon using DAB chromogen

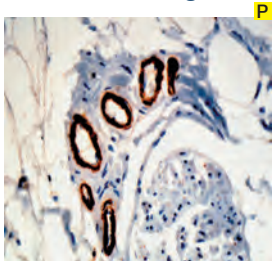
Clone:	EP19
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic phospho-peptide corresponding to residues surrounding Ser789 of human Caldesmon protein
Specificity:	Human Caldesmon
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK /HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN774-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN774-10M**
Xmatrx®	**AY774-YCD, AY774-50D**
Concentrated:	**NU774-UC, NU774-5UC**
Recommended Positive Control:	**FG-774N**
Recommended Barrier Control:	**FB-774N**

Caldesmon is a regulatory protein found in smooth muscle and other tissues which interacts with actin, myosin, tropomyosin, and calmodulin. Also, it is useful in differentiation of smooth muscle from myofibroblast tumors, uterus leiomyoma from endometrial stroma tumor. Caldesmon is a marker for identification of epitheloid mesothelioma.

Caldesmon, High MW, Smooth Muscle

P



Smooth muscle stained with Anti-Caldesmon using DAB

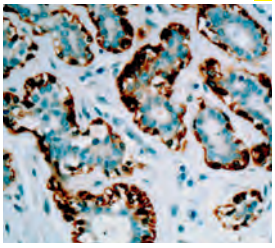
Clone:	h-CD
Isotype:	IgG1
Source:	Mouse
Immunogen:	Crude human uterus caldesmon
Specificity:	Caldesmon, high molecular weight
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM332-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM332-10M**
Xmatrx®	**AX332-YCD, AX332-50D**
Concentrated:	**MU332-UC, MU332-5UC**
Recommended Positive Control:	**FG-332M**
Recommended Barrier Control:	**FB-332M**

Caldesmon is considered to be the marker for smooth muscle cell phenotype. Monoclonal antibody to caldesmon, high molecular weight (120-150kD), in combination with monoclonal antibodies to calponin and smooth muscle myosin heavy chains could be used to distinguish benign and in-situ lesions from invasive carcinomas. Anti-caldesmon antibody may be used to characterize the differentiation process of mammary myoepithelial cells in the developing mammary gland, investigate the nature of myoepithelial cells and study the development of human smooth muscle cells. This antibody stains caldesmon in cytoplasm of vascular, visceral smooth muscle and myoepithelial cells in normal and benign human mammary gland.

Calponin

P



Myoepithelial cells in normal breast highlighted by Calponin stained using DAB chromogen

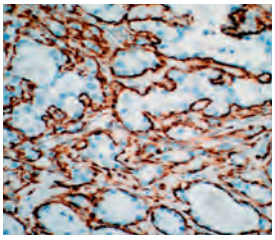
Clone:	CALP
Isotype:	IgG1
Source:	Mouse
Immunogen:	Crude human uterus extract
Specificity:	Phosphorylated tyrosine
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM333-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM333-10M**
Xmatrx®	**AX333-YCD, AX333-50D**
Concentrated:	**MU333-UC, MU333-5UC**
Recommended Positive Control:	**FG-333M**
Recommended Barrier Control:	**FB-333M**

Calponin is a 33 kD thin filament-associated protein that plays a role in regulation of smooth muscle contractility by anchoring myosin to actin. Monoclonal antibody to Calponin in combination with clones SMMS-1(anti-myosin heavy chain antibody) and h-CD (anti-Caldesmon antibody) could be used to distinguish benign and in-situ lesions from invasive carcinomas. This antibody stains Calponin in cytoplasm of vascular and visceral smooth muscle cells, myoepithelial cells in normal and benign human mammary gland, and certain stromal myofibroblasts.

Calponin-1

P



Pleomorphic adenoma stained with anti-Human Calponin-1using DAB chromogen

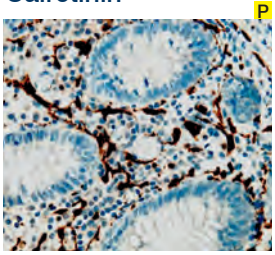
Clone:	EP63
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues near the C-terminus of human Calponin-1 protein.
Specificity:	Human Calponin-1
Localization:	-
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN821-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN821-10M**
Xmatrx®	**AY821-YCD, AY821-50D**
Concentrated:	**NU821-UC, NU821-5UC**
Recommended Positive Control:	**FG-821N**
Recommended Barrier Control:	**FB-821N**

Calponin is a smooth muscle specific, actin-, tropomyosin- and calmodulin-binding protein thought to be involved in regulation of actomyosin as well as the regulation or modulation of contraction. Calponin antibody has been found to be useful as a marker for myoepithelial and basal lamina in differentiating microinvasive from in situ ductal carcinomas of the breast. Calponin antibody may also have applications in malignant myoepithelium and pleomorphic adenoma of salivary gland as well as a useful marker for fine needle aspirates of papillary breast lesions.

Calretinin

P



Appendix stained with Anti-calretinin using DAB chromogen

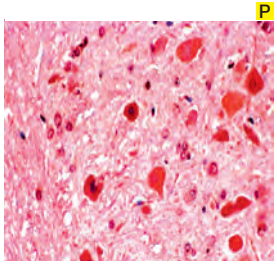
Clone:	2 E7
Isotype:	IgG
Source:	Mouse
Immunogen:	Recombinant human calretinin
Specificity:	Anti-human calretinin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM583-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM583-10M**
Xmatrx®	**AX583-YCD, AX583-50D**
Concentrated:	**MU583-UC, MU583-5UC**
Recommended Positive Control:	**FG-583M**
Recommended Barrier Control:	**FB-583M**

Calretinin, also know as calbindin 2, is a calcium binding protein that belongs to the calbindin family. It is mainly expressed in the central and peripheral nervous systems and in many normal and pathological tissues. Calretinin can be found in different subsets of neurons and is considered as a valuable marker of neuronal subpopulations for anatomical and developmental studies. It has been implicated as a calcium sensor, and regulator of apoptosis. Calretinin is approved as a highly sensitive and specific marker for mesothelial cells and one of the best positive makers for differentiating epithelial malignant mesotheliomas.

Calretinin

P



Calretinin positivity in brain neurons using AEC chromogen

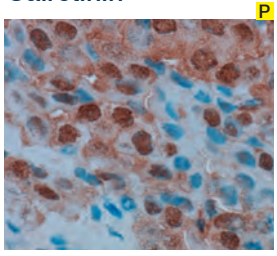
Clone:	Polyclonal
Isotype:	N/A
Source:	Rabbit
Immunogen:	Recombinant human calretinin
Specificity:	Calretinin antigen
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR413-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR413-10R**
Xmatrx®	**AW413-YCD, AW413-50D**
Concentrated:	**PU413-UP, PU413-5UP**
Recommended Positive Control:	**FG-413P**
Recommended Barrier Control:	**FB-413P**

Calretinin is approved as a highly sensitive and specific marker for mesothelial cells and one of the best positive markers for differentiating epithelial malignant mesotheliomas. This polyclonal antibody specifically recognizes calretinin in tissue originating from human, monkey, rat and mouse. It does not cross-react with other known calcium-binding proteins as determined by Western Blot analysis and by its distribution in the brain as determined by immunohistochemistry. This antibody stains calretinin antigen in cytoplasm of various neurons in normal brain and mesothelial cells.

Calretinin

P



Mesotheloma tissue stained with anti-Calretinin using DAB chromogen

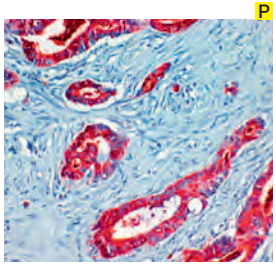
Clone:	SP13
Isotype:	IgG
Source:	Rabbit
Immunogen:	Recombinant full length mouse calretinin protein
Specificity:	Human Calretinin
Localization:	Cytoplasm and Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN747-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN747-10M**
Xmatrx®	**AY747-YCD, AY747-50D**
Concentrated:	**NU747-UC, NU747-5UC**
Recommended Positive Control:	**FG-747N**
Recommended Barrier Control:	**FB-747N**

This antibody recognizes a protein of 31.5kDa, identified as Calretinin. Calretinin is an intracellular calcium-binding protein belonging to the troponin C superfamily characterized by a structural motif described as the EF-hand domain. It is abundantly expressed in central and peripheral neural tissues, particularly in the retina and in the neurons of the sensory pathways, and calretinin may play an important role in the survival of nerve cells during disturbances in calcium homeostasis. Calretinin is also expressed by both normal and neoplastic mesothelial cells, and it has been suggested as a useful marker for the identification of malignant mesotheliomas of the epithelial type and for the differentiation of these malignancies of lung adenocarcinoma.

Carcinoembryonic Antigen (CEA)

P



Colon carcinoma stained with Anti-CEA using AEC chromogen

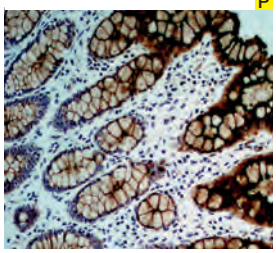
Clone:	B01-94-11M-P
Isotype:	IgG 2b
Source:	Mouse
Immunogen:	Human carcinoembryonic antigen
Specificity:	Carcinoembryonic antigen (CEA)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM009-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM009-10M**
Xmatrx®	**AX009-YCD, AX009-50D**
Concentrated:	**MU009-UC, MU009-5UC**
Recommended Positive Control:	**FG-009M**
Recommended Barrier Control:	**FB-009M**

CEA consists of a heterogeneous family of related oncofetal 200 kD glycoproteins that is secreted into the glycocalyx surface of gastrointestinal cells. Usually CEA is demonstrated as a linear labeling of the apical poles of cells lining the glandular lumen and, occasionally, as weak staining near the apex of colonic epithelial cells. Pancreatic carcinomas, testicular tumor, gallbladder neoplasms and granular cell myoblastomas stain positive, whereas malignant tumors of brain, prostate, skin, lymphoreticular tissues, hepatocellular carcinomas, esophageal squamous cell carcinomas, and mesothelioma fail to stain for CEA. This antibody stains carcinoembryonic antigen in the cytoplasm of positive cells.

Carcinoembryonic Antigen (CEA)

P



Colon showing CEA positivity stained using DAB chromogen

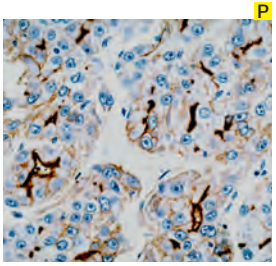
Clone:	CEA88
Isotype:	IgG1
Source:	Mouse
Immunogen:	Partially purified human CEA
Specificity:	Carcinoembryonic antigen (CEA)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM365-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM365-10M**
Xmatrx®	**AX365-YCD, AX365-50D**
Concentrated:	**MU365-UC, MU365-5UC**
Recommended Positive Control:	**FG-365M**
Recommended Barrier Control:	**FB-365M**

CEA is demonstrated as a linear labeling of the apical poles of cells lining the glandular lumen and, occasionally, as weak staining near the apex of colonic epithelial cells. CEA, however, should not be used as a marker of differentiation because many colon and lung tumors actually show increased staining with differentiation. Pancreatic carcinomas, testicular tumor, gallbladder neoplasms and granular cell myoblastomas stain positive, whereas malignant tumors of brain, prostate, skin, lymphoreticular tissues, hepatocellular carcinomas, oesophageal squamous cell carcinomas, and mesothelioma fail to stain for CEA.

Carcinoembryonic Antigen (CEA)

P



CEA expression in hepatocellular carcinoma stained using DAB chromogen

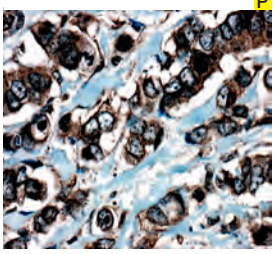
Clone:	Polyclonal
Isotype:	N/A
Source:	Rabbit
Immunogen:	CEA isolated from secondary colon carcinoma by salt precipitation, ion and gel chromatography
Specificity:	Carcinoembryonic antigen (CEA)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR009-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR009-10R**
Xmatrx®	**AW009-YCD, AW009-50D**
Recommended Positive Control:	**FG-009P**
Recommended Barrier Control:	**FB-009P**

CEA consists of a heterogeneous family of related oncofetal 200 kD glycoproteins that is secreted into the glycocalyx surface of gastrointestinal cells. Usually CEA is demonstrated as a linear labeling of the apical poles of cells lining the glandular lumen and, occasionally, as weak staining near the apex of colonic epithelial cells, pancreatic carcinomas, testicular tumor, gallbladder neoplasms and granular cell myoblastomas stain positive, whereas malignant tumors of brain, prostate, skin, lymphoreticular tissues, hepatocellular carcinomas, esophageal squamous cell carcinomas, and mesothelioma fail to stain for CEA. This antibody stains carcinoembryonic antigen in the cytoplasm of the positive cells.

Catenin Delta 1 (p120)

P



Breast Ca. stained with anti-Catenin delta 1 (p120) antibody using DAB chromogen

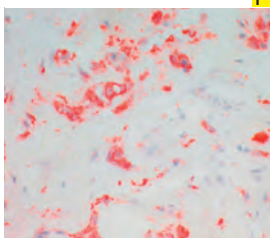
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	Catenine delta
Specificity:	Catenine delta
Localization:	Membrane and cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AR706-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR706-10R**
Xmatrx®	**AW706-YCD, AW706-50D**
Concentrated:	**PU706-UP, PU706-5UP**
Recommended Positive Control:	**FG-706P**
Recommended Barrier Control:	**FB-706P**

Catenines are proteins that are linked to the cytoplasmic domain of transmembrane cadherins. P120 Catenin is a member of this Aemadillo gene family of junctional plaque proteins. Cytoplasmic accumulation of p120 catenine has been observed in lung cancer, pancreatic cancer, gastric cancer and colon cancers and is associated with poor prognosis in colon cancer patients. In breast lobular neoplasia, anti p120 Catenine shows a diffuse cytoplasmic immunostaining pattern, while breast ductal neoplasma retains the membrane immunostaining pattern. P120 catenine antibody is useful in differentiation of lobular carcinoma from ductal carcinoma of the breast and in identifying early lesions of lobular neoplasia.

Cathepsin D

P



Breast carcinoma stained with Anti-Cathepsin D using AEC chromogen

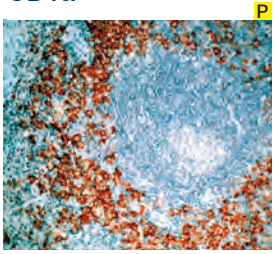
Clone:	C15
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Cathepsin D protein purified from human spleen
Specificity:	Cathepsin D
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM467-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM467-10M**
Xmatrx®	**AX467-YCD, AX467-50D**
Concentrated:	**MU467-UC, MU467-5UC**
Recommended Positive Control:	**FG-467M**
Recommended Barrier Control:	**FB-467M**

Cathepsin D production and secretion appears to be induced by estrogen in estrogen-responsive tumor cells but is constitutively produced in estrogen-unresponsive tumor cells. Immunohistochemical localization of Cathepsin D in normal human tissues has shown a granular cytoplasmic staining pattern corresponding to intracellular lysosomes. Among normal tissues studied, highest concentrations of Cathepsin D were found in sweat glands and liver with some staining of sebaceous glands.

CD1a

P



Lymph node stained with Anti-CD1a using DAB as Chromogen

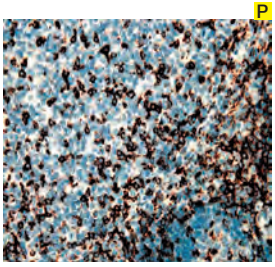
Clone:	O10
Isotype:	IgG
Source:	Mouse
Immunogen:	Human CD1a
Specificity:	CD1a
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM490-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM490-10M**
Xmatrx®	**AX490-YCD, AX490-50D**
Concentrated:	**MU490-UC, MU490-5UC**
Recommended Positive Control:	**FG-490M**
Recommended Barrier Control:	**FB-490M**

CD1 is expressed on cortical thymocytes, Langerhans cells, and dendritic cells. It is absent on mature peripheral blood T cells but intracytoplasmic expression is detected on activated T lymphocytes.At least five CD1 genes (CD1a, b, c, d, and e) are identified. CD1 proteins have been demonstrated to restrict T-cell response to non-peptide lipid and lycolipid antigens and play a role in non-classical antigen presentation. Ab-5 detects cortical thymocytes, Langerhans cells in epidermis, dendritic cells of dermis and Langherhans cells of mucosa of tonsil. It may also detect small focal groups of lymphocytes outside the germinal centers of tonsil indicating a cross-reaction with CD1b. This antibody is useful in the characterization of leukemias and lymphomas.

CD2

P



Tonsil stained with Anti-CD2 using DAB chromogen

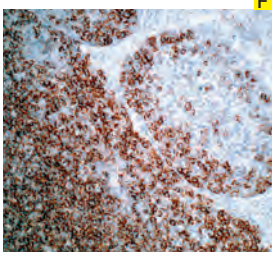
Clone:	AB75
Isotype:	IgG1 kappa
Source:	Mouse
Immunogen:	Recombinant fusion protein corresponding to the external domain of the CD2 molecule.
Specificity:	CD2 antigen (LFA-2)
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM438-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM438-10M**
Xmatrx®	**AX438-YCD, AX438-50D**
Concentrated:	**MU438-UC, MU438-5UC**
Recommended Positive Control:	**FG-438M**
Recommended Barrier Control:	**FB-438M**

The CD2 antigen, also known as lymphocyte function antigen2 (LFA2), is a single chain type I transmembrane molecule of about 50 kD and consists of 351 amino acids. It plays a critical role in activation of T cells. It binds to CD58 on antigen presenting cells and induces tyrosine phosphorylation of other molecules involved in T cell activation. It also plays a regulatory role in T-cell or NK-cell mediated cytolysis. CD2 antigen is expressed on a majority of T cells in peripheral lymphoid tissue, NK cells, cortical thymocytes and most malignant cells of T cell origin. This antibody stains the membrane of positive T cells.

CD3 (T Cell)

F



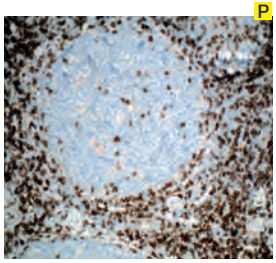
Frozen tonsil stained with Anti-CD3 using DAB chromogen

Clone:	UCHT1
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Human infant thymocytes and peripheral lymphocytes from a patient with Sezary cell leukemia
Specificity:	CD3
Localization:	Membrane
Pre-treatment:	None

Ready-to-Use (Manual):	**AM258-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM258-10M**
Xmatrx®	**AX258-YCD, AX258-50D**
Concentrated:	**MU258-UC, MU258-5UC**
Recommended Positive Control:	**FG-258M**
Recommended Barrier Control:	**FB-258M**

CD3 is a lineage-specific “pan T-cell” surface antigen composed of five different polypeptide chains with molecular masses ranging from 16 to 28 kD. Antibody UCHT1 reacts with the 20 kD epsilon chain of the CD3 molecule. CD3 is normally present on mature thymocytes, resting and activated peripheral T lymphocytes (both inducer and suppressor/cytotoxic), and on some natural killer cells. It is absent in peripheral B lymphocytes, monocytes, granulocytes, and platelets. This antibody stains CD3 antigen in the cytoplasm of immature and common thymocytes and on the surface of mature thymocytes in frozen tissue sections.

CD3 (T Cell)



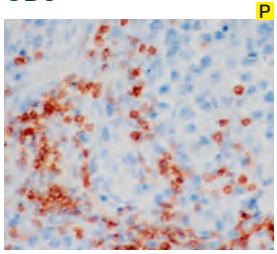
Tonsil stained with Anti-CD3 using DAB chromogen

Clone:	PS1
Isotype:	IgG 2a
Source:	Mouse
Immunogen:	Fusion protein to the epsilon chain of CD3
Specificity:	CD3 antigen
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM322-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM322-10M**
Xmatrx®	**AX322-YCD, AX322-50D**
Concentrated:	**MU322-UC, MU322-5UC**
Recommended Positive Control:	**FG-322M**
Recommended Barrier Control:	**FB-322M**

Human CD3 complex is associated with the T cell receptor (TcR) at the cell surface. Expression of CD3 antigen is generally restricted to the T-cell lineage, but weak expression might also occur in Purkinje cells in the brain, in macrophages, and in Reed-Sternberg cells in Hodgkin's lymphoma. The CD3 antigen is expressed early in the maturation of T cells. Monoclonal antibody PS1 reacts with the non-glycosylated epsilon chain of CD3. The antibody stains CD3 antigen in the membrane of the positive cells.

CD3



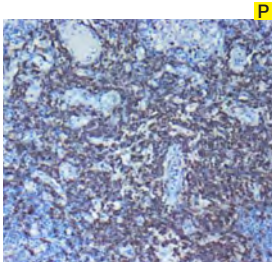
Lymphoma stained with anti-Human CD3 using DAB chromogen

Clone:	EP41
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human CD3, a complex of proteins that associates directly with the T-Cell antigen receptor (TCR)
Specificity:	Human CD3
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN846-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN846-10M**
Xmatrx®	**AY846-YCD, AY846-50D**
Concentrated:	**NU846-UC, NU846-5UC**
Recommended Positive Control:	**FG-846N**
Recommended Barrier Control:	**FB-846N**

CD3 (Cluster of Differentiation 3) is a complex of proteins that associates directly with the T cell antigen receptor (TCR). CD3 is composed of five invariant polypeptide chains that associate to form three dimers. The five invariant chains of CD3 are labeled gamma, delta, epsilon, zeta, and eta. The CD3 is involved in T cell development and survival. It is expressed on T cells in Thymus, peripheral lymphoid tissue, blood and bone marrow. CD3 is a commonly used marker for identification of T cell and T cell derived malignancies. This CD3 antibody has been validated by the 9th International Conference on Human Leukocyte Differentiation Antigens (HLDA9).

CD3e



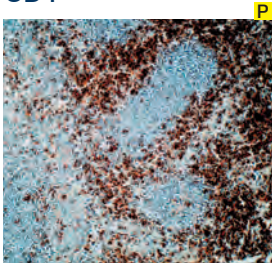
Lymph node stained with CD3e

Clone:	C3e/1931
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant human CD3e fragment
Specificity:	CD3e
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM931-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM931-10ME**
Xmatrx®	**AX931-50DE, AX931-YCDE**
Concentrated:	**MU931-UCE, MU931-5UCE**
Recommended Positive Control:	**FG-931ME**
Recommended Barrier Control:	**FB-931ME**

CD3e is part of the T cell receptor-CD3 (TCR-CD3) complex present on T-lymphocyte cell surface that plays an essential role in the adaptive immune response. The CD3-epsilon polypeptide together with CD3-gamma, -delta and –zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers forms the TCR-CD3 complex. The CD3 complex is closely associated with the lymphocyte cell surface with the TCR. CD3e plays an essential role in correct T-cell development. Reportedly, the CD3 complex is involved in signal transduction to the T-cell interior following antigen recognition. The CD3 antigen is first detectable in early thymocytes and probably represents one of the earliest signs of commitment to the T cell lineage. In cortical thymocytes, CD3 is predominantly intra-cytoplasmic. However, in medullary thymocytes, it appears on the T-cell surface. The CD3 antigen is a highly specific marker for T cells and is present in the majority of T-cell neoplasms.

CD4



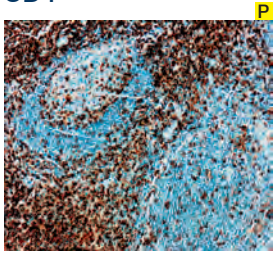
Tonsil stained with Anti-CD4 using DAB chromogen

Clone:	4B12
Isotype:	IgG1
Source:	Mouse
Immunogen:	Prokaryotic recombinant protein corresponding to the external domain of the CD4 molecule
Specificity:	CD4 protein
Localization:	Membrane
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM421-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM421-10M**
Xmatrx®	**AX421-YCD, AX421-50D**
Concentrated:	**MU421-UC, MU421-5UC**
Recommended Positive Control:	**FG-421M**
Recommended Barrier Control:	**FB-421M**

CD4 is a 55-60 kD cell-surface glycoprotein, which participates in the molecular complexes involved in both T cell development and its antigen recognizing activity, by binding to the nonpolymorphic region of class II MHC. CD4 is considered as a stage marker of T cell development in the thymus, for it is expressed on the cell surface in a stage specific manner, during T cell development. This antibody reacts on a low level with human monocytes and macrophages but does not react with B-cells, granulocytes and thrombocytes. This antibody stains CD4 antigen on the membrane of positive T lymphocytes.

CD4



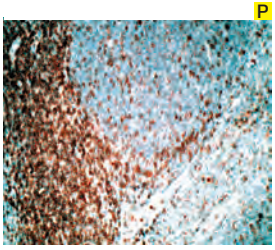
Tonsil stained with anti-CD4 using DAB chromogen

Clone:	EP204
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD4 protein
Specificity:	CD4 protein
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN722-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN722-10M**
Xmatrx®	**AY722-YCD, AY722-50D**
Concentrated:	**NU722-UC, NU722-5UC**
Recommended Positive Control:	**FG-722N**
Recommended Barrier Control:	**FB-722N**

CD4 (cluster of differentiation 4) is a glycoprotein found on the surface of immune cells such as T helper cells, monocytes, macrophages and dendritic cells. CD4 is expressed in the majority of T-cell lymphomas, including mycosis fungoides. Lymphomas are CD4 positive with the exception of aggressive NK-cell leukemia and extranodal NK/T-cell lymphoma. CD4 plays an important role in the classification of lymphocytes in inflammatory lesions and malignant lymphomas.

CD5



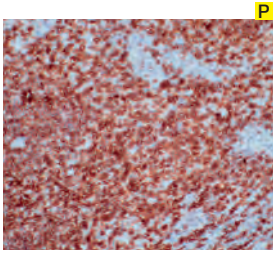
Tonsil tissue stained with Anti-CD5 using DAB chromogen

Clone:	4C7
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Recombinant protein corresponding to the external domain of the CD5 molecule.
Specificity:	Human CD5 antigen, 67 kD antigen
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM430-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM430-10M**
Xmatrx®	**AX430-YCD, AX430-50D**
Concentrated:	**MU430-UC, MU430-5UC**
Recommended Positive Control:	**FG-430M**
Recommended Barrier Control:	**FB-430M**

The CD5 antigen, also known as T1, is a 67 kD single chain glycoprotein expressed on normal and malignant T cells and on chronic lymphocytic leukemia cells. It is found in high density on medullary thymocytes and in low density on cortical thymocytes.

CD5



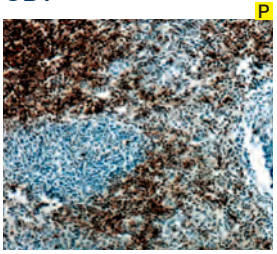
Tonsil tissue stained with anti-Human CD5using DAB chromogen

Clone:	EP77
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human CD5 protein.
Specificity:	Human CD5
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN824-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN824-10M**
Xmatrx®	**AY824-YCD, AY824-50D**
Concentrated:	**NU824-UC, NU824-5UC**
Recommended Positive Control:	**FG-824N**
Recommended Barrier Control:	**FB-824N**

CD5 antibody is a T-cell associated marker that is also expressed by two B-cell neoplasms: lymphocytic leukemia and mantle cell lymphoma. CD5 antigen is expressed in 95% of thymocytes and 72% of peripheral blood lymphocytes. In tumors, CD5 is expressed on T-cell malignancies, B cell chronic lymphocytic leukemia (CLL)/small lymphocytic lymphoma (SLL), and mantle-cell lymphoma. It is a useful diagnostic tool for these tumors. In addition, anti-CD5 is helpful in diagnosis of thymic carcinoma (CD5 positive).

CD7



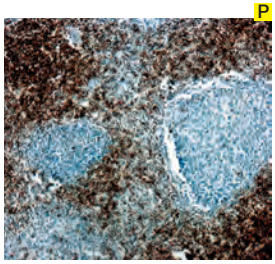
Tonsil stained with anti-Human CD7 using DAB chromogen

Clone:	SP94
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to the internal region of human CD7 protein
Specificity:	Human CD7
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN761-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN761-10M**
Xmatrx®	**AY761-YCD, AY761-50D**
Concentrated:	**NU761-UC, NU761-5UC**
Recommended Positive Control:	**FG-761N**
Recommended Barrier Control:	**FB-761N**

Anti-CD7 (SP94) Rabbit Monoclonal Primary Antibody (anti-CD7 (SP94) is directed against the 40kD transmembrane glycoprotein, CD7 is expressed on the majority of immature and mature T-lymphocytes, and T cell leukemia. It is also found on natural killer cells, a small subpopulation of normal B cells and on malignant B cells. Anti-CD7 (SP94) may be used to aid in the identification of T cell lymphomas. This gene encodes a transmembrane protein which is a member of the immunoglobulin superfamily. Cross-linking surface CD7 positively modulates T cell and NK cell activity as measured by calcium fluxes, expression of adhesion molecules, cytokine secretion and proliferation. CD7 associates directly with phosphoinositol 3'-kinase. CD7 ligation induces production of D-3 phosphoinositides and tyrosine phosphorylation.

CD7



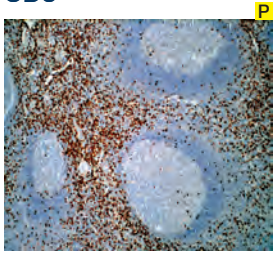
Tonsil stained with Anti-CD7 using DAB Chromogen

Clone:	LP15
Isotype:	IgG2b
Source:	Mouse
Immunogen:	CD7
Specificity:	CD7
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM702-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM702-10M**
Xmatrx®	**AX702-YCD, AX702-50D**
Concentrated:	**MU702-UC, MU702-5UC**
Recommended Positive Control:	**FG-702M**
Recommended Barrier Control:	**FB-702M**

The CD7 molecule is membrane-bound glycoprotein of 40kD and is the earliest T Cell specific antigen to be expressed in lymphocyetes. CD7 antigen is also the only early marker to persist throughout differentiation. The function and role of the CD7 molecule has not yet been fully identified although the activation of T cells with gamma/ delta receptors has been proposed based on mAb- activation. CD7 antigen is reported to be found on a majority of peripheral blood T cells, most natural killer cells and thymocytes.

CD8



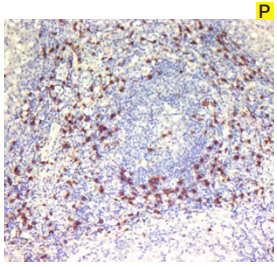
Tonsil stained with anti-CD8 using DAB chromogen

Clone:	SP16
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to the C-terminus of alpha chain of the human CD8 molecule
Specificity:	CD8
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN740-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN740-10M**
Xmatrx®	**AY740-YCD, AY740-50D**
Concentrated:	**NU740-UC, NU740-5UC**
Recommended Positive Control:	**FG-740N**
Recommended Barrier Control:	**FB-740N**

CD8 molecule consists of two chains, termed α and β chain, which are expressed as a disulphide-linked α/β heterdimer or as an α/α homodimer on T cell subset (25-35% of mature peripheral T-cells), thymocytes (70-80%), and NK cells(30%, which are also CD3 negative).. The majority of CD8+ T cells express CD8 as α/β heterdimer. CD8 functions as a co-receptor in concert with TCR for binding the MHC class I/peptide complex. The HIV-2 envelope glycoprotein binds CD8 α chain (but not β chain).

CD8a



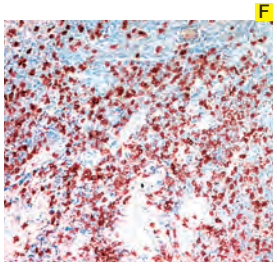
Tonsil stained with CD8a

Clone:	C8/468
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human recombinant CD8 protein
Specificity:	CD8a
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM929-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM929-10ME**
Xmatrx®	**AX929-50DE, AX929-YCDE**
Concentrated:	**MU929-UCE, MU929-5UCE**
Recommended Positive Control:	**FG-929ME**
Recommended Barrier Control:	**FB-929ME**

CD8 is a cell surface glycoprotein found on most cytotoxic T lymphocytes that mediates efficient cell-cell interactions within the immune system. The CD8 antigen acts as a coreceptor and functions either as a homodimer composed of two alpha chains (CD8 alpha/alpha) or as a heterodimer composed of one alpha and one beta chain (CD8 alpha/beta). Binding of CD8 with MHC class I molecules helps stabilize the T-cell receptor (TCR)/peptide MHC (pMHC) complex and localizes the CD8-associated protein tyrosine kinase lck (p56lck) to the CD3 complex; which aids in the activation of mature CD8+ T cells. It is a useful marker for distinguishing helper/inducer T-lymphocytes and most peripheral T-cell lymphomas are CD4+/CD8-. Anaplastic large cell lymphoma is usually CD4+ and CD8- and in T-lymphoblastic lymphoma/leukemia CD4 and CD8 are often co-expressed. CD8 is also found in littoral cell angioma of the spleen. A majority of thymocytes and a subpopulation of mature T cells and NK cells express CD8a.

CD8 (T cell, Suppressor/Cytotoxic)



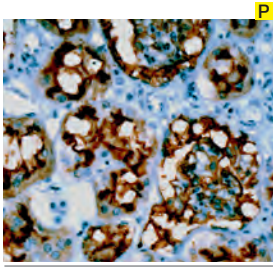
Frozen tonsil stained with Anti-CD8 using AEC chromogen

Clone:	T8
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Human thymocytes
Specificity:	CD8 antigen
Localization:	Membrane
Pre-treatment:	None

Ready-to-Use (Manual):	**AM261-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM261-10M**
Xmatrx®	**AX261-YCD, AX261-50D**
Concentrated:	**MU261-UC, MU261-5UC**
Recommended Positive Control:	**FG-261M**
Recommended Barrier Control:	**FB-261M**

The CD8 antigen, also known as T8 or Leu2 or Lyt2 or T cell co-receptor, is a dimer with a molecular mass of 32 kD. The T8 antigen is expressed by the suppressor/cytotoxic subset of T lymphocytes which comprise most of the cortical thymocytes and approximately 30% of peripheral blood T cells. Studies have demonstrated that increased levels of T8+ cells are associated with viral infections such as hepatitis B, Epstein-Barr, and cytomegalovirus. This antibody may be used in the study of cell-mediated cytotoxicity and that of immunoregulation and T-lymphocyte-mediated suppression. This antibody stains CD8 (T8) antigen suppressor/cytotoxic T lymphocytes and majority of thymocytes (approximately 80%) in frozen tissue sections.

CD10



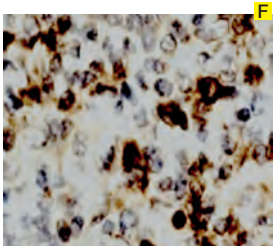
CD10 expression in kidney stained using DAB chromogen

Clone:	56C6
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human CD10
Specificity:	CD10
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM451-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM451-10M**
Xmatrx®	**AX451-YCD, AX451-50D**
Concentrated:	**MU451-UC, MU451-5UC**
Recommended Positive Control:	**FG-451M**
Recommended Barrier Control:	**FB-451M**

CD10, a 100KD glycoprotein, also known as Common Acute Lymphocytic Leukemia Antigen (CALLA), is a cell surface enzyme with neutral metalloendopeptidase activity which inactivates a variety of biologically active peptides. CD10 is expressed on the cells of lymphoblastic, Burkitt's and follicular germinal center lymphomas, and chronic myelogenous leukemia (CML). It is also expressed on the surface of normal early lymphoid progenitor cells, immature B cells within bone marrow and germinal center B cells within lymphoid tissue. CD10 is also present on breast myoepithelial cells, with especially high expression on the brush border of kidney and gut epithelial cells.

CD11b (C3bi receptor)



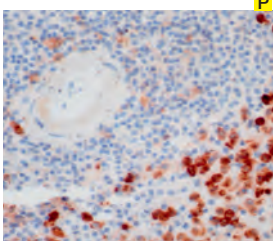
Frozen tonsil mucosa stained with Anti-CD11b using DAB chromogen

Clone:	M01
Isotype:	IgM kappa
Source:	Mouse
Immunogen:	Human adherent mononuclear cells
Specificity:	Myeloid antigen M01
Localization:	Membrane
Pre-treatment:	268M

Ready-to-Use (Manual):	**AM270-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM270-10M**
Xmatrx®	**AX270-YCD, AX270-50D**
Recommended Positive Control:	**FG-270M**
Recommended Barrier Control:	**FB-270M**

CD11b also known as M01, a human myeloid antigen, is a noncovalently associated, two-subunit glycoprotein of 94 and 155 kD. This antibody can be used as a neutrophil marker. It identifies the C3bi receptor and is expressed by peripheral blood monocytes, certain macrophages, granulocytic cells (from myelocytes to mature neutrophils) and a subset of null cells in frozen tissue sections. Histiocytic cells in the spleen and lymph nodes also express this antigen.

CD11b/ITAM



Spleen stained with anti-Human CD11b/ITAM using DAB chromogen

Clone:	EP45
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human CD11b/IT protein
Specificity:	Human CD11b/IT
Localization:	-
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN851-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN851-10M**
Xmatrx®	**AY851-YCD, AY851-50D**
Concentrated:	**NU851-UC, NU851-5UC**
Recommended Positive Control:	**FG-851N**
Recommended Barrier Control:	**FB-851N**

CD11b, also known as ITAM, Integrin alpha-M or MAC-1 alpha subunit or CR3 alpha chain belongs to the integrin alpha chain family; it is predominately present in human myeloid cells, NK1 cells, monocytes, granulocytes and follicular dendritic cells. The alpha subunit of ITAM/beta-2 complex (CD11b/CD18, Mac-1), is a receptor for fibrinogen, factor X, and ICAM1. ITAM/beta-2 is implicated in adhesive interactions of monocytes, macrophages, and granulocytes. CD11b has been used as a common myeloid marker. CD11b is expressed in about 50% of acute myeloid leukemia (AML). In combination with CD117, CD11b is helpful in differentiating acute promyelocytic leukemia (CD11b negative) from recovering benign myeloid proliferation (CD11b positive, CD117 negative). In acute promyelocytic leukemia patients treated with all-trans retinoic acid or Arsenic trioxide (As2O3), CD11b is a marker for differentiating the induction of leukemia cells. CD11b is also expressed on microglia cells and involved in the development of neurodegenerative diseases.

CD11c

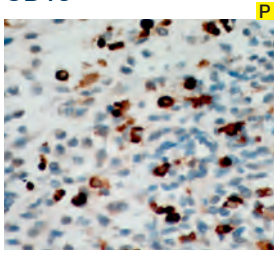
Tonsil stained with anti-Human CD11c/ITGAX using DAB chromogen

Clone:	EP157
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD11c/ITGA Xprotein
Specificity:	Human CD11c
Localization:	-
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN822-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN822-10M**
Xmatrx®	**AY822-YCD, AY822-50D**
Concentrated:	**NU822-UC, NU822-5UC**
Recommended Positive Control:	**FG-822N**
Recommended Barrier Control:	**FB-822N**

CD11c (ITGAX) is a member of the leukocyte integrin family of adhesion proteins. CD11c is expressed prominently on the plasma membranes of monocytes, tissue macrophages, NK cells, and most dendritic cells (DCs). A lower level of expression is also observed on neutrophils as a result of its high level of expression on most DCs. An antibody to CD11c may aid in identification of lesions with histiocytic origin. It may also been used as a marker for hairy cell leukemia in paraffin embedded tissues.

CD13



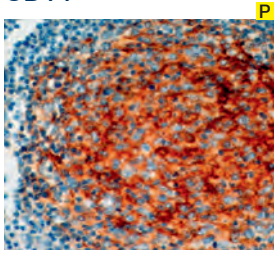
Lymophoma stained with anti-Human CD13using DAB chromogen

Clone:	EP117
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human CD13protein
Specificity:	Human CD13
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN832-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN832-10M**
Xmatrx®	**AY832-YCD, AY832-50D**
Concentrated:	**NU832-UC, NU832-5UC**
Recommended Positive Control:	**FG-832N**
Recommended Barrier Control:	**FB-832N**

CD13 antigen, also known as aminopeptidase N, is a member of the type II integral membrane metalloproteases which also includes the leukocyte antigens CD10, CD26, CD73 and BP-1. CD13 antigen is a receptor for the coronaviruses which cause respiratory disease in humans and several animal species. CD13 antigen is reported to be expressed on granulocytes, monocytes and their precursors, most acute myeloid leukemias and a smaller proportion of acute lymphoid leukemias. Nonhematopoietic cells which express CD13 antigen include epithelial cells, renal proximal tubules, intestinal brush border, endothelial cells, fibroblasts, brain cells, bone marrow, osteoclasts and cells lining the bile canaliculi.

CD14



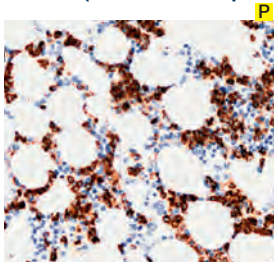
Tonsil stained with anti-Human CD14 using DAB chromoge

Clone:	EP128
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of of human CD14 protein
Specificity:	Human CD14
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN814-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN814-10M**
Xmatrx®	**AY814-YCD, AY814-50D**
Concentrated:	**NU814-UC, NU814-5UC**
Recommended Positive Control:	**FG-814N**
Recommended Barrier Control:	**FB-814N**

CD14 is a surface protein preferentially expressed on monocytes/ macrophages. It binds lipopolysaccharide binding protein and recently has been shown to bind apoptotic cells. CD14 is expressed by monocytes, dermal dendritic cells, and anti-CD14 is considered a monocyte marker. Anti-CD14 antibody labels Kupffer cells in liver sinusoids. In lymphoid tissues, dendritic cells are distinctly stained. Most other normal tissues are negative. This antibody labels monocyte macrophages and Langerhans cells in Langerhans cell histiocytosis. Tumor cells are positive in monocytic leukemia and true histiocytic lymphomas for CD14. Sinusoidal histiocytes express CD14 and CD169, whereas most of the other monocyte-derived cells in reactive lymph node lack these markers. Anti-CD14 labels numerous diffuse large B-cell lymphomas and splenic marginal zone lymphoma but not in other B-cell lymphomas.

CD15 (Blood Group Antigen Lewis X)



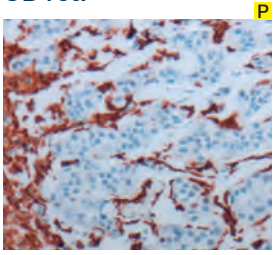
Bone marrow stained with Anti-CD15 using DAB chromogen

Clone:	BRA4F1
Isotype:	IgM
Source:	Mouse
Immunogen:	Myelomonocytic leukemia cells
Specificity:	CD15
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM302-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM302-10M**
Xmatrx®	**AX302-YCD, AX302-50D**
Concentrated:	**MU302-UC, MU302-5UC**
Recommended Positive Control:	**FG-302M**
Recommended Barrier Control:	**FB-302M**

CD15 (BRA4F1) reacts with human CD15 antigen present on myeloid cells, mainly granulocytes but not on B cells, T cells, monocytes, erythrocytes or platelets. It also reacts with Hodgkin's and Reed-Sternberg cells in individuals with Hodgkin's disease. This antibody stains CD15 antigen in positive cells.

CD16a



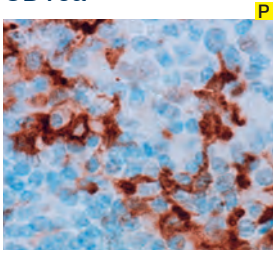
Lung Adeno Cancer tissue stained with anti-Human CD16a using DAB chromogen

Clone:	SP189
Isotype:	IgG
Source:	Rabbit
Immunogen:	A syntheticpeptide derivedfrom the C-terminusof humanCD16a protein
Specificity:	Human CD16a
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN749-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN749-10M**
Xmatrx®	**AY749-YCD, AY749-50D**
Concentrated:	**NU749-UC, NU749-5UC**
Recommended Positive Control:	**FG-749N**
Recommended Barrier Control:	**FB-749N**

CD16 is a cluster of differentiation found on the surface of natural killer cells, neutrophils or polymorphonuclear leukocytes (PMN), monocytesand macrophages CD16 is a 50-70 kDa glycoprotein which occurs in two isoforms, CD16a and CD16b. CD16a is a transmembrane molecule expressed on about 90% of NK cells and also found on macrophages and subsets of monocytes and T cells. CD16b is glycosylphosphatidylinositol-anchored and is expressed on virtually all neutrophils.

CD16a



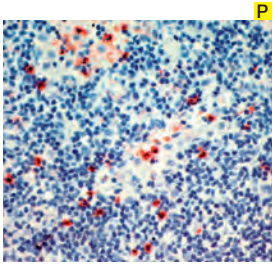
Tonsil stained with anti-Human CD16a using DAB chromogen

Clone:	SP175
Isotype:	IgG
Source:	Rabbit
Immunogen:	Tonsil stained with anti-Human CD16a using DAB chromogen
Specificity:	Human CD16a
Localization:	Cytoplasm and cell-cell junctions
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN762-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN762-10M**
Xmatrx®	**AY762-YCD, AY762-50D**
Concentrated:	**NU762-UC, NU762-5UC**
Recommended Positive Control:	**FG-762N**
Recommended Barrier Control:	**FB-762N**

CD16 is a cluster of differentiation found on the surface of natural killer cells, neutrophils or polymorphonuclear leukocytes (PMN), monocytes and macrophages. CD16 is a 50-70 kDa glycoprotein which occurs in two isoforms, CD16a and CD16b. CD16a is a transmembrane molecule expressed on about 90% of NK cells and also found on macrophages and subsets of monocytes and T cells. CD16b is glycosyl phosphatidyl inositol-anchored and is expressed on virtually all neutrophils.

CD16



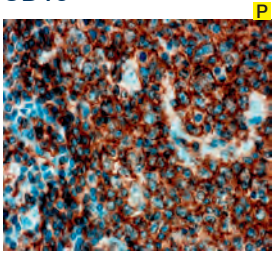
Lymph node stained with Anti-CD16 using AEC chromogen

Clone:	2H7
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Recombinant fusion protein corresponding to the external domain of the CD16 molecule common to both the trans-membrane form and the GPI-linked form
Specificity:	CD16 antigen
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM437-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM437-10M**
Xmatrx®	**AX437-YCD, AX437-50D**
Concentrated:	**MU437-UC, MU437-5UC**
Recommended Positive Control:	**FG-437M**
Recommended Barrier Control:	**FB-437M**

CD16 antigen is also known as Fc gamma receptor III and has a molecular weight of 50 to 70kD. It is a low affinity Fc receptor for complexed IgG-Fc gamma RIII, expressed on natural killer (NK) cells, granulocytes, activated macrophages and a subset of T cells expressing alpha-beta or gamma-delta T cell antigen receptors. Antibody-dependent cytotoxicity of NK cells is triggered by the engagement of CD16 with the Fc portion of IgG immunoglobulins bound to target cell-associated antigens. This antibody may be useful in the study of NK cell activity in autoimmune, neoplastic and infectious diseases. This antibody stains the membrane and cytoplasm of positive cells.

CD19



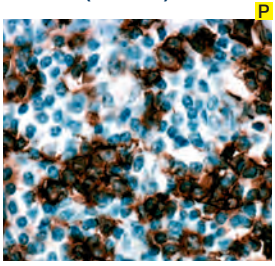
Tonsil stained with anti-CD19 using DAB chromogen

Clone:	EP169
Isotype:	IgG
Source:	Rabbit
Immunogen:	A recombinant fragment corresponding to residues in human CD19 protein
Specificity:	Human CD19 protein
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN729-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN729-10M**
Xmatrx®	**AY729-YCD, AY729-50D**
Concentrated:	**NU729-UC, NU729-5UC**
Recommended Positive Control:	**FG-729N**
Recommended Barrier Control:	**FB-729N**

CD19 is expressed on follicular dendritic cells and B cells. In fact, it is present on B cells from earliest recognizable B-lineage cells during development to B-cell blasts but is lost on maturation to plasma cells. It primarily acts as a B cell co-receptor in conjunction with CD21 and CD81. CD19 has been observed in lymphomas and leukemias but often weak/negative in follicular lymphoma or diffuse large B-cell lymphoma. CD19 may provide useful diagnostic information for the study of B-lymphoproliferative disorders.

CD20 (B Cell)



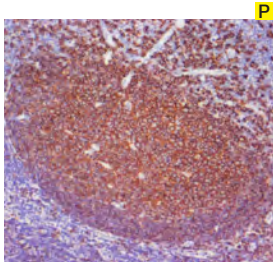
Tonsil tissue stained with Anti-CD-20 using DAB chromogen

Clone:	L-26
Isotype:	IgG2a Kappa
Source:	Mouse
Immunogen:	Human tonsil B cells
Specificity:	CD20
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM238-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM238-10M**
Xmatrx®	**AX238-YCD, AX238-50D**
Concentrated:	**MU238-UC, MU238-5UC**
Recommended Positive Control:	**FG-238M**
Recommended Barrier Control:	**FB-238M**

This antibody reacts with a formalin-resistant intracytoplasmic epitope found in the majority of B cells which is now considered to be the CD20 antigen, a pan-B cell marker. The antibody primarily recognizes a 33 kD polypeptide B cell component and also a minor 30 kD cellular antigen.The staining pattern is consistent with pan-B reactivity, producing staining for B cells in lymphoid and peripheral blood tissue. This antibody intensely stains germinal centers and B immunoblasts in lymphoid tissue. L26 may prove to be a useful marker for L&H variants of Reed-Sternberg cells of Hodgkin's lymphomas where reactive pattern is distinct from other Reed-Sternberg variants. This antibody stains positive for membrane and some cytoplasm for B cells.

CD20/MS4A1



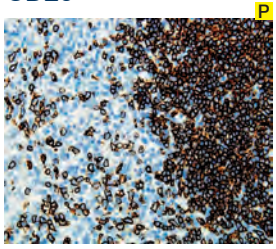
Tonsil stained with CD20

Clone:	GEL/773
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Recombinant human MS4A1 protein
Specificity:	CD20/MS4A1
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM947-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM947-10M**
Xmatrx®	**AX947-50D, AX947-YCD**
Concentrated:	**MU947-UC, MU947-5UC**
Recommended Positive Control:	**FG-947M**
Recommended Barrier Control:	**FB-947M**

The CD20, which is a 33 kDa protein that traverses the cell membrane, initially expresses on pre B-cells and retains on mature B-cells. It is a non-Ig differentiation antigen of B-cells and its expression is restricted to normal and neoplastic B-cells, being absent from all other leukocytes and tissues. CD20 is lost upon terminal differentiation into plasma cells. Anti-CD20 can be used for immunophenotyping of leukemia and malignant cells, B lymphocyte detection in peripheral blood, and B cell localization in tissues. It reacts with the majority of B-cells present in peripheral blood and lymphoid tissues and their derived lymphomas. In lymphoid tissue, germinal center blasts and B-immunoblasts are particularly reactive. It is a reliable antibody for ascribing a B-cell phenotype in known lymphoid tissues. Rarely, CD20-positive T-cell lymphomas have been reported. Reactivity has also been noted with Reed-Sternberg cells in cases of Hodgkin's disease, particularly of lymphocyte predominant type.

CD20



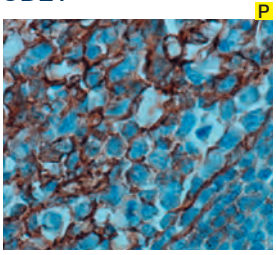
Tonsil stained with Anti-CD20 using DAB chromogen

Clone:	CD20/C23
Isotype:	IgG1 kappa
Source:	Mouse
Immunogen:	Human CD20
Specificity:	CD20
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM537-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM537-10M**
Xmatrx®	**AX537-YCD, AX537-50D**
Concentrated:	**MU537-UC, MU537-5UC**
Recommended Positive Control:	**FG-537M**
Recommended Barrier Control:	**FB-537M**

CD20 is a transmembrane, non-glycosylated protein expressed on B-cell precursors and mature B cells, but is lost following differentiation into plasma cells. This antibody does not cross-react with non-hematopoietic neoplasms. CD20 (B-cell Pan) reacts with a membrane antigen present in B-cells. This antibody strongly recognizes Reed-Sternberg cells predominant in Hodgkin`s disease. Since no staining of histiocytes or plasma cells has been observed and CD20 has not been detected in T-cell malignancies, it is a very strong marker of B-cell lymphomas. B-cell panmarker recognizes a formalin resistant intracytoplasmic antigen.

CD21



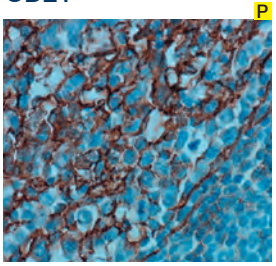
Tonsil tissue stained with anti-CD21 using DAB chromogen

Clone:	SP186
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from the C-terminus of human CD21 protein
Specificity:	CD21
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN745-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN745-10ME**
Xmatrx®	**AY745-YCDE, AY745-50DE**
Concentrated:	**NU745-UCE, NU745-5UCE**
Recommended Positive Control:	**FG-745NE**
Recommended Barrier Control:	**FB-745NE**

CD21 is a single-pass type 2 transmembrane protein that serves as the complement receptor for C3d and the Epstein-Barr virus. CD21 is useful in the identification of follicular dendritic cell matrix found in normal lymph node and tonsillar tissue. This antibody also labels follicular dendritic cell sarcomas. Anti-CD21 is valuable in differentiating follicular lymphoma with marginal zone differentiation from marginal zone lymphoma with follicular involvement. It also plays a role in separating among nodular lymphocyte predominant Hodgkin lymphoma, lymphocyte-rich classic Hodgkin lymphoma, and T-cell/ histiocyte-rich B-cell lymphoma in combination with other B-cell and T-cell markers. The antigen is absent on T-lymphocytes, monocytes, and granulocytes.

CD21



Tonsil tissue stained with anti-CD21 using DAB chromogen

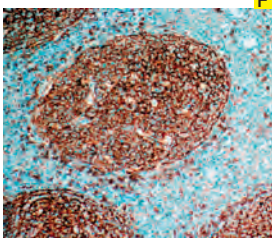
Clone:	EP64
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding toresidues on the Cterminusofhuman CD21 protein
Specificity:	Human CD21
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN825-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN825-10M**
Xmatrx®	**AY825-YCD, AY825-50D**
Concentrated:	**NU825-UC, NU825-5UC**
Recommended Positive Control:	**FG-825N**
Recommended Barrier Control:	**FB-825N**

CD21 is a single-pass type 2 transmembrane protein that serves as thecomplement receptor for C3d and the Epstein-Barr virus. Anti-CD21 isvaluable in differentiating follicular lymphoma with marginal zone differentiation from marginal zone lymphoma with follicularinvolvement. It also plays a role in separating among nodular lymphocytepredominant Hodgkin lymphoma, lymphocyte-rich classic Hodgkinlymphoma, and T-cell/histiocyte-rich B-cell lymphoma in combinationwith other B-cell and T-cell markers. The antigen is absent on Tlymphocytes, monocytes, and granulocytes.

CD21 (B Cell)

F



Frozen tonsil stained with Anti-CD21 using AEC chromogen

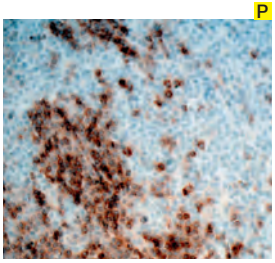
Clone:	B2
Isotype:	IgM Kappa
Source:	Mouse
Immunogen:	Human diffuse poorly differentiated lymphoma cells from a patient with B cell lymphoma
Specificity:	B2+ B lymphocytes
Localization:	Membrane
Pre-treatment:	None

Ready-to-Use (Manual):	**AM266-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM266-10M**
Xmatrx®	**AX266-YCD, AX266-50D**
Recommended Positive Control:	**FG-266M**
Recommended Barrier Control:	**FB-266M**

The B2 antigen, also known as CD21 and CR2, is a 140 kD glycosylated Type 1 integral membrane protein. The CD21 molecule is expressed on mature B lymphocytes, follicular dendritic reticulum cells (FDC), pharyngeal epithelial cells, and possibly on a subset of normal thymocytes. This antigen is also expressed by B lymphocytes in patients with B cell lymphomas, most B cell chronic lymphocytic leukemia (CLL), and a small portion of non-T cell acute lymphoblastic leukemias (ALL). This antibody stains B2 (CD21) antigen in membranes of mature B lymphocytes, follicular dendritic reticulum cells (FDC), pharyngeal epithelial cells, and possibly on a subset of normal thymocytes in frozen tissue sections.

CD22

P



Tonsil stained with anti-CD22 using DAB chromogen

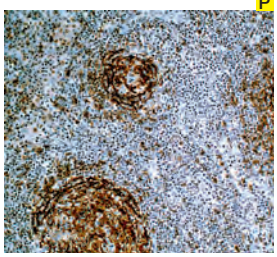
Clone:	FPC1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant fusion protein corresponding to the external domain of the CD22 molecule
Specificity:	Human CD22 antigen (BL-CAM)
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM439-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM439-10M**
Xmatrx®	**AX439-YCD, AX439-50D**
Concentrated:	**MU439-UC, MU439-5UC**
Recommended Positive Control:	**FG-439M**
Recommended Barrier Control:	**FB-439M**

The CD22 antigen also known as BL-CAM is a single chain type I transmembrane molecule which contains seven Ig-like domains and molecular weight of 130 to 140kD. In B-cell malignancies, CD22 expression ranges from 60% to 80% depending on the histological type and on the assays used. CD22 antigen is weakly expressed in myeloid leukemias and non-T cell acute lymphoblastic leukemias and is strongly expressed in hairy cell leukemias. It is absent on peripheral blood T cells, T cell leukemias, granulocytes, and monocytes. This antibody stains both the membrane and cytoplasm of B lymphocytes.

CD23

P



CD23 positivity in Lymph node stained using DAB chromogen

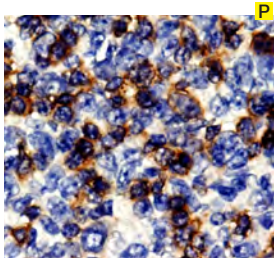
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	CD23 antigen
Specificity:	CD23
Localization:	Membrane
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AR460-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR460-10R**
Xmatrx®	**AW460-YCD, AW460-50D**
Concentrated:	**PU460-UP, PU460-5UP**
Recommended Positive Control:	**FG-460P**
Recommended Barrier Control:	**FB-460P**

CD23 is a 45 kD type II integral membrane glycoprotein that belongs to the C-type lectin family of adhesion molecules.The CD23 molecule is identical to the low affinity IgE receptor found on B-cells. CD23 has been proposed to be an important regulator of IgE synthesis. Anti-CD23 antibody treatment of rats inhibited antigen-specific IgE immune response by 90%. CD23 is a common B cell/monocyte surface antigen. CD23 is expressed on IgM+/IgD+ B cells, as well as on a variety of other cells, including monocytes, eosinophils, dendritic cells, platelets, and macrophages. Expression of CD23 has been detected in neoplastic cells such as chronic lymphocytic leukemia, some cases of lymphoma and is strongly expressed on EBV transformed B lymphoblasts.

CD27

P



Tonsil stained with Anti-CD27 using DAB chromogen

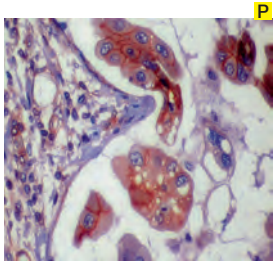
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	CD27 molecule
Specificity:	Human CD27
Localization:	Cell Membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR912-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR912-10RE**
Xmatrx®	**AW912-YCDE, AW912-50DE**
Concentrated:	**PU912-UPE, PU912-5UPE PU912-1UPE**
Recommended Positive Control:	**FG-912PE**
Recommended Barrier Control:	**FB-912PE**

CD27 or TNFRSF7, is a type I transmembrane protein and TNF receptor that is expressed on subsets of T, B, NK, and hematopoietic progenitor cells. CD27 controls the activity of these cells by engaging with CD70, which is transiently expressed by cells of the immune system upon activation. Studies have demonstrated that the interaction between CD27 and its ligand, CD70, plays a role in providing costimulation for prolonged lymphocyte survival, enhanced T-cell proliferation, and memory-cell formation. Preclinical studies with fully-human agonistic antibodies to CD27 indicate that responses to CD27 stimulation are recapitulated by human lymphocytes in vitro and in vivo and can promote adaptive immunity in a variety of tumors models.

CD29 (Integrin Beta-1 Subunit)

P



Breast carcinoma expressing CD 29 stained using DAB chromogen

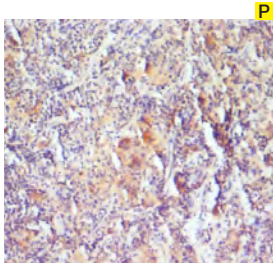
Clone:	JB1a
Isotype:	IgG
Source:	Mouse
Immunogen:	Purified ß 1 integrin from Jurkat cells
Specificity:	CD29
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM298-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM298-10M**
Xmatrx®	**AX298-YCD, AX298-50D**
Concentrated:	**MU298-UC, MU298-5UC**
Recommended Positive Control:	**FG-298M**
Recommended Barrier Control:	**FB-298M**

Integrins play an important role in cell adhesion and migration, and their normal function is critical in the induction and maintenance of cell differentiation. This antibody reacts with CD29, the 130 kD integrin ß1 subunit. CD29 is ubiquitous, with broad tissue distribution, but is not expressed on erythrocytes and is expressed only weakly on granulocytes. Loss or down-regulation of CD29 has been proposed to be one of the general pathways through which carcinoma cells may acquire a more invasive and differentiated phenotype. This antibody stains CD29 antigen in cell membrane of most cells including all leukocytes, although very weak on granulocytes.

CD30

P



Hodgkin's stained with CD30

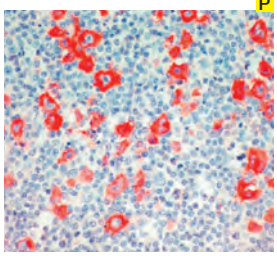
Clone:	EPR4102
Isotype:	IgG
Source:	Rabbit
Immunogen:	Synthetic peptide corresponding to residues at the C-terminus of Human CD30
Specificity:	CD30
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN955-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN955-10M**
Xmatrx®	**AY955-50D, AY955-YCD**
Concentrated:	**NU955-UC, NU955-5UC**
Recommended Positive Control:	**FG-955N**
Recommended Barrier Control:	**FB-955N**

CD30 functions as a receptor for TNFSF8/CD30L and may play a role in the regulation of cellular growth and transformation of activated lymphoblasts. In Hodgkin's disease, the CD30/Ki-1 antigen is expressed by mononuclear-Hodgkin and multinucleated Reed-Sternberg cells. It is also expressed by the tumor cells of a majority of anaplastic large cell lymphomas as well as by a varying proportion of activated T and B cells. Anti-CD30 distinguishes large cell lymphomas derived from activated lymphoid cells from histocytic malignancies and lymphomas derived from resting and precursor lymphoid cells or from anaplastic carcinomas.

CD30 (Ki-1 Antigen)

P



Hodgkins stained with Anti-CD30 using AEC chromogen

Clone:	Ber-H2
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Hodgkin's lymphoma cell line L428
Specificity:	CD30 (Ki-1) antigen
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM327-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM327-10M**
Xmatrx®	**AX327-YCD, AX327-50D**
Recommended Positive Control:	**FG-327M**
Recommended Barrier Control:	**FB-327M**

CD30 (Ki-1 antigen), a 120 kD single chain glycoprotein, is expressed in only a small population of normal lymphoid tissue. By contrast, it is expressed in approximately 50% of all malignant lymphomas including all cases of Hodgkin's disease and a vast majority of Ki-1 positive anaplastic large cell lymphomas. Ki-1 antigen can be detected in sera from lymphoma patients, but not in sera from normal individuals with systemic infection. This antibody stains CD30 (Ki-1) antigen in the membrane of positive cells.

CD30 (Ki-1 Antigen)

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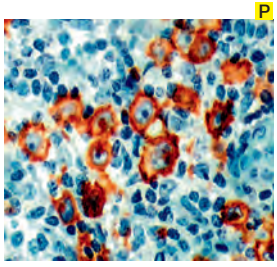

Reed Sternberg cell showing perinuclear dot positivity of CD30 antibody stained using DAB chromogen

Clone:	HRS-4
Isotype:	IgG1
Source:	Mouse
Immunogen:	Cell line L540, derived from Hodgkin's disease
Specificity:	CD30 (Ki-1 antigen)
Localization:	Membrane (mostly perinuclear dot positivity) & Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM351-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM351-10M**
Xmatrx®	**AX351-YCD, AX351-50D**
Concentrated:	**MU351-UC, MU351-5UC**
Recommended Positive Control:	**FG-351M**
Recommended Barrier Control:	**FB-351M**

CD30 (Ki-1 antigen), a 120 kD single chain glycoprotein, is expressed in only a small population of normal lymphoid tissue. By contrast, it is expressed in approximately 50% of all malignant lymphomas including all cases of Hodgkin's disease and a vast majority of Ki-1 positive anaplastic large cell lymphomas. Ki-1 antigen can be detected in sera from lymphoma patients, but not in sera from normal individuals with systemic infection. This antibody stains CD30 antigen in the membrane and sometimes the cytoplasm of the positive cells.

CD31 (Endothelial Cell)

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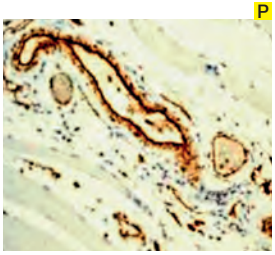

Endothelial cells stained with Anti-CD31using DAB chromogen

Clone:	JC/70A
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Spleen membrane from a patient with hairy cell leukemia
Specificity:	CD31 antigen
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM232-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM232-10M**
Xmatrx®	**AX232-YCD, AX232-50D**
Recommended Positive Control:	**FG-232M**
Recommended Barrier Control:	**FB-232M**

Anti-CD31 monoclonal antibody JC/70A reacts with a membrane glycoprotein with an apparent size of 100 kD in endothelial cells and 130 kD in platelets. It strongly stains endothelium in normal tissue as well as benign and malignant tumor tissue. The antibody labels mega-karyocytes, platelets, and occasionally plasma cells, and weakly stains mantle zone B cells, peripheral T cells and neutrophils. This antibody stains CD31 antigen in membrane and sometimes cytoplasm of endothelial and other positive cells in normal and abnormal tissues.

CD31 (PECAM-1)

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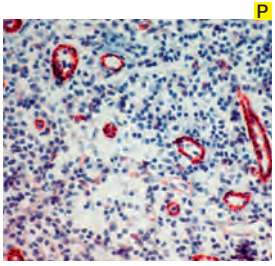

Lymph node stained with Anti-PECAM-1 using AEC chromogen

Clone:	9G11
Isotype:	IgG1
Source:	Mouse
Immunogen:	Activated human umbilical vein endothelial cells
Specificity:	CD31
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM241-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM241-10M**
Xmatrx®	**AX241-YCD, AX241-50D**
Concentrated:	**MU241-UC, MU241-5UC**
Recommended Positive Control:	**FG-241M**
Recommended Barrier Control:	**FB-241M**

CD31 (Platelet Endothelial Cell Adhesion Molecule) is a 145 kD cell surface glycoprotein that was originally defined by a monoclonal antibody which is bound to endothelial cells and also to platelets. This protein may be a component involved in the interaction of endothelial cells with coagulation factors, platelets, and the subendothelial matrix. The antibody has been shown to be specific for CD31 and reacts mainly with platelets, monocytes, macrophages, granulocytes, and B cells. The other reactive cells are endothelial cells, histiocytes, and glomeruli. This antibody stains CD31 antigen in membrane of endothelial cells and other positive cells.

CD34 (Endothelial Cell)

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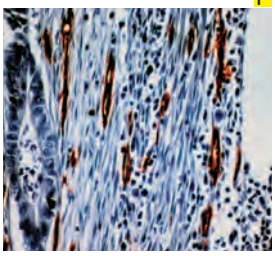

Endothelial cells stained with Anti-CD34 using DAB chromogen

Clone:	QBEnd/10
Isotype:	IgG1
Source:	Mouse
Immunogen:	CD34 isolated from human placental endothelial cells
Specificity:	CD34
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM236-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM236-10M**
Xmatrx®	**AX236-YCD, AX236-50D**
Concentrated:	**MU236-UC, MU236-5UC**
Recommended Positive Control:	**FG-236M**
Recommended Barrier Control:	**FB-236M**

This is an antibody to the CD34 antigen in human endothelial and hematopoietic cells. It stains positive in a variety of vascular and lymphatic tumors. QBEnd/10 may now prove to be a more specific method of evaluating vascularization than Factor VIII antibody and is an important tool for tumor evaluation. This antibody stains endothelial cell cytoplasm and cross-reacts with basement membrane collagen.

CD34

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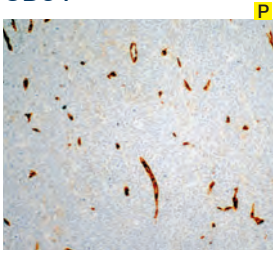

Angiosarcoma stained with anti-Human CD34 using DAB chromogen

Clone:	EP88
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to C-terminal of human CD34 protein
Specificity:	Human CD34
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN779-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN779-10M**
Xmatrx®	**AY779-YCD, AY779-50D**
Concentrated:	**NU779-UC, NU779-5UC**
Recommended Positive Control:	**FG-779N**
Recommended Barrier Control:	**FB-779N**

CD34 functions as a cell-cell adhesion factor and cell-surface glycoprotein. It may also mediate the attachment of stem cells to bone marrow extracellular matrixes or directly to stromal cells. Cells expressing CD34 are normally found in the umbilical cord and bone marrow as hematopoietic cells, and in vascular endothelium. In addition to stem cell recognition, CD34 is expressed by vascular endothelium; it appears that proliferating endothelial cells express this molecule in greater amounts than resting cells. In comparison to factor VIII R Antigen, CD34 is an important marker for quantifying and purifying hematopoietic progenitor/stem cells. It is useful in identification of tumors with endothelial or lymphoid differentiation. In addition, CD34 aids in detection of gastrointestinal stromal tumors.

CD35

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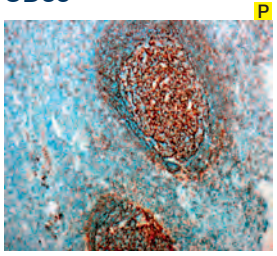

Tonsil stained with anti-CD35 using DAB chromogen

Clone:	SP191
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide near from the C-terminus of human CD35 protein
Specificity:	CD35
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN741-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN741-10ME**
Xmatrx®	**AY741-YCDE, AY741-50DE**
Concentrated:	**NU741-UC, NU741-5UC**
Recommended Positive Control:	**FG-741NE**
Recommended Barrier Control:	**FB-741NE**

CD35, also named as erythrocyte complement receptor 1 (CR1), is a member of the complement activation (RCA) family and is located in the 'cluster RCA' region of chromosome 1. CD35 expressed by glomerular podocytes, erythrocytes, and leukocytes (B cells, subset of T cells, monocytes, macrophages, neutrophils, and eosinophils). CD35 also can be detected on follicular dendritic cells. It is a marker for the diagnosis of follicular dendritic cell sarcoma. This antibody labels dendritic cells in tonsil and spleen and glomerular podocytes in kidney.

CD35

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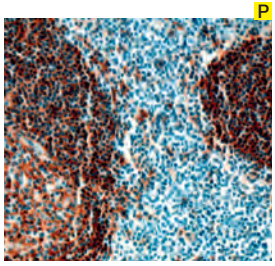

Tonsil stained with Anti-CD35 using DAB chromogen

Clone:	RLB25
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Prokaryotic recombinant fusion protein corresponding to the first four complement control protein domains of the CD35 molecule
Specificity:	CD35
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM431-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM431-10M**
Xmatrx®	**AX431-YCD, AX431-50D**
Concentrated:	**MU431-UC, MU431-5UC**
Recommended Positive Control:	**FG-431M**
Recommended Barrier Control:	**FB-431M**

The CD35 antigen is a transmembrane monomeric glycoprotein of 60-250kD. It is also known as complement receptor 1 (CR1) or C3b/C4b receptor as it binds the complement components C3b and C4b and thereby helps clear foreign particles. By facilitating C3b and C4b cleavage by factor I and accelerating the decay of the C3 and C5 convertases, CD35 limits complement activation and produces ligands for other complement receptors. CD35 antigen has been used in characterization of tumors of histiocytes and accessory dendritic cells by immunohistochemistry. This antibody stains the membrane of follicular dendritic cells, a subset of T- cells.

CD38

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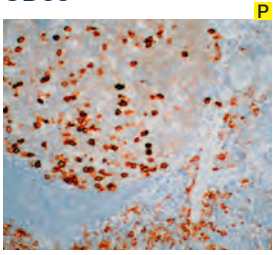

Tonsil stained with anti-Human CD38 using DAB chromogen

Clone:	SP149
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from the C-terminus of human CD38 protein
Specificity:	Human CD38
Localization:	Membrane and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN769-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN769-10M**
Xmatrx®	**AY769-YCD, AY769-50D**
Concentrated:	**NU769-UC, NU769-5UC**
Recommended Positive Control:	**FG-769N**
Recommended Barrier Control:	**FB-769N**

CD38 is a transmembrane protein, that is highly expressed on thymocytes. It is also present on activated T-cells and terminally differentiated B-cells (plasma cells).It works on immature T and B cells, monocytes, and natural killer cells. CD38 participates in cell adhesion, signal transduction and calcium signaling. It is expressed at high levels in the plasma cell tumor, prostate cancer, stomach cancer, and neuroblastoma. CD38 is used as one of the plasma cell markers and its ligand is CD31 molecules.

CD40

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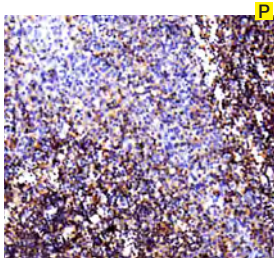

Tonsil stained with Anti-CD40 using DAB chromogen

Clone:	CL1673
Isotype:	IgG
Source:	Mouse
Immunogen:	CD40 molecule, TNF receptor super family member 5. Imunogen sequence
Specificity:	Human CD40
Localization:	Cell Membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM913-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM913-10ME**
Xmatrx®	**AX913-YCDE, AX913-50DE**
Concentrated:	**MU913-UCE, MU913-5UCE MU913-1UCE**
Recommended Positive Control:	**FG-913M**
Recommended Barrier Control:	**FB-913M**

CD40 or Bp50 is a member of the TNF receptor superfamily and a central regulator of anti-tumor immunity. Activation of CD40 on the cell surface of antigen presenting cells (APCs) promotes APCs ability to prime antigen-specific T cells and tumor-infiltrating myeloid cells thus enhancing their anti-tumor and anti-fibrotic activity. The ligand for CD40 is CD154, which is expressed on a variety of cell types, including activated T and B cells, endothelial and smooth muscle cells. CD40 is a promising target for cancer immunotherapy and CD40 activation in clinical trials demonstrated encouraging results in patients with pancreatic carcinoma, Hodgkin lymphoma, high-grade B cell lymphoma and metastatic melanoma.

CD41/Integrin Alpha IIb

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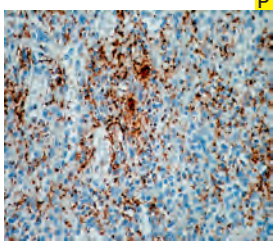

Spleen stained with anti-CD41 using DAB chromogen

Clone:	EP178
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD41/ Integrin alpha IIb protein
Specificity:	CD41/Integrin alpha IIb
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN732-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN732-10ME**
Xmatrx®	**AY732-YCDE, AY732-50DE**
Concentrated:	**NU732-5UCE, NU732-5CE**
Recommended Positive Control:	**FG-732NE**
Recommended Barrier Control:	**FB-732NE**

Integrin alpha chain 2b, also known as CD41, is a heterodimeric integral membrane protein. CD41 is expressed on platelets and megakaryocytes, but also on early embryonic hematopoietic stem cells. The integrin alpha chain associates with a beta 3 chain, CD61. The resulting CD41/CD61 complex is a receptor for fibronectin, fibrinogen, von Willebrand factor, vitronectin and thrombospondin, and has a crucial role in coagulation. Mutations that impair its role in coagulation result in thrombasthenia.

CD43

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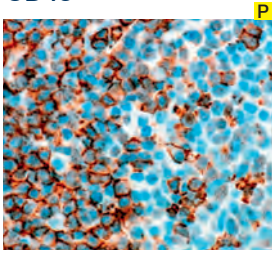

Tonsil tissue stained with anti-CD43 using DAB chromogen

Clone:	SP55
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from the human CD43
Specificity:	Human CD43
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN748-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN748-10M**
Xmatrx®	**AY748-YCD, AY748-50D**
Concentrated:	**NU748-UC, NU748-5UC**
Recommended Positive Control:	**FG-748N**
Recommended Barrier Control:	**FB-748N**

CD43 is one of the major glycoproteins of thymocytes and T lymphocytes. It plays a role in the physicochemical properties of the T cell surface and in lectin binding. Defects in the CD43 molecule are associated with the development of Wiskott-Aldrich syndrome. It also appears in about 25% of intestinal MALTomas.CD43 presents carbohydrate ligands to selectins. It has an extended rodlike structure that could protrude above the glycocalyx of the cell and allow multiple glycan chains to be accessible for binding. The antigen is a counter receptor for SN/Siglec1. During T cell activation CD43 is actively removed from the T cell antigen presenting cell contact site suggesting a negative regulatory role in adaptive immune response. Because it stains granulocytes and their precursors, it is also an effective marker for myeloid tumors.

CD43 & CD45RA Cocktail

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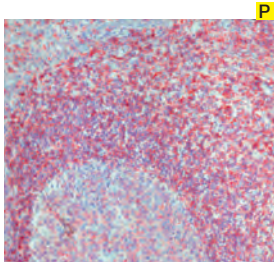

Tonsil stained with Anti-CD43 & Anti-CD45RA cocktail using AEC chromogen

Clone:	MT1 & MB1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Hodgkin's lymphoma
Specificity:	Leukocyte
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM159-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM159-10M**
Xmatrx®	**AX159-YCD, AX159-50D**
Recommended Positive Control:	**FG-159M**
Recommended Barrier Control:	**FB-159M**

MB1 recognizes a membrane-bound antigen which occurs on all B cells with the exception of plasma cells, and on some mature T cells. The MB1 antigen is not present on immature T cells. MT1 reacts with a membrane-bound antigen which occurs on all T cells. MT1 also reacts with thymocytes, monocytes, macrophages, epidermal Langerhans cells and the Kupffer cells of the liver, as well as with myeloid cells and erythrocyte precursors. The MT1 antigens are not found on mature or activated B cells. This mixture of monoclonal antibodies MT1 and MB1 stains membrane of all leukocytes, and recognizes all T and B cells, as well as NK cells, myeloid cells, monocytes, histiocytes and erythrocyte precursors.

CD43 (T Cell, Leukosialin)

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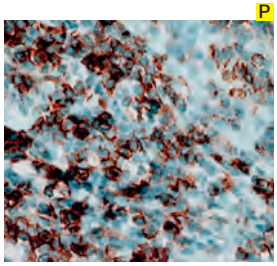

Tonsil stained with Anti-CD43 using DAB chromogen

Clone:	DFT-1
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Immature pluripotential human leukemia cell line K562
Specificity:	CD43 and lymphoma or leukemia subtyping
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM305-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM305-10M**
Xmatrx®	**AX305-YCD, AX305-50D**
Concentrated:	**MU305-UC, MU305-5UC**
Recommended Positive Control:	**FG-305M**
Recommended Barrier Control:	**FB-305M**

The CD43 antigen, also known as leukosialin or sialophorin is a 95-110 kD protein. Monoclonal DFT-1 reacts with this protein on T cells and thymocytes and a 115-135 kD molecule on neutrophils and platelets. In addition, the CD43 epitope is present on many cells such as granulocytes, monocytes, macrophages, NK cells, platelets, activated B cells, plasma cells, epidermal Langerhans cells and also on bone marrow hematopoietic stem cells. This antibody stains CD43, a membrane-bound antigen found on all T cells, macrophages, monocytes, and epidermal Langerhans cells.

CD44 (Phagocytic Glycoprotein-1, HCAM)

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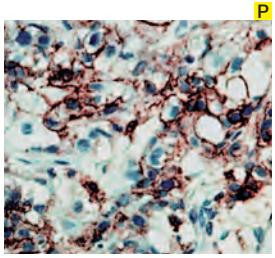

Breast Tissue stained with Anti-CD44 using DAB chromogen

Clone:	DF1485
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Cell surface glycoprotein CD44
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM310-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM310-10M**
Xmatrx®	**AX310-YCD, AX310-50D**
Concentrated:	**MU310-UC, MU310-5UC**
Recommended Positive Control:	**FG-310M**
Recommended Barrier Control:	**FB-310M**

CD44 (phagocytic glycoprotein-1, homing cell adhesion molecule, HCAM, CD44s) is a cell surface 80-90 kD glycoprotein important in lymphocyte homing, T-cell activation and adhesion to hyaluronate and matrix proteins. It is expressed on the surface of a wide variety of cells, among which are T-cells, B-cells, monocytes, fibroblasts, keratinocytes, vascular endothelial cells, columnar epithelium of the GI tract, and transitional epithelium of the urinary tract. This antibody stains CD44 antigen in cell membranes of various cells such as T cells, B cells, monocytes, granulocytes and even on most erythrocytes, epithelial cells, central nervous white matter, fibroblasts, skeletal muscle and on a wide variety of tumors.

CD45

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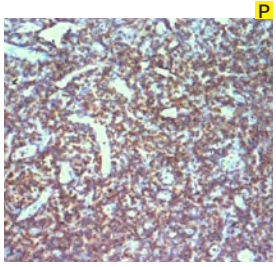

Tonsil stained with CD45

Clone:	2B11 & PD7/26
Isotype:	IgG/k
Source:	Mouse
Immunogen:	Human lymphocytes and neoplastic cells
Specificity:	CD45
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM941-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM941-10M**
Xmatrx®	**AX941-50D, AX941-YCD**
Concentrated:	**MU941-UC, MU941-5UC**
Recommended Positive Control:	**FG-941M**
Recommended Barrier Control:	**FB-941M**

CD45 antigen (leukocyte common antigen), a unique and ubiquitous membrane glycoprotein with a molecular mass of about 200 kDa is expressed on almost all hematopoietic cells except for mature erythrocytes. CD45 has a functional role in hematopoietic cell activation and differentiation. Anti-CD45 (anti-leukocyte common antigen) is routinely used to aid the differential diagnosis of undifferentiated neoplasms, whenever malignant lymphoma is suspected by the morphological or clinical data. Therefore, a positive result is highly indicative of hematolymphoid origin. Certain types of hematolymphoid neoplasms may lack CD45 (Hodgkin's lymphoma, some T-cell lymphomas, and some leukemias), so its absence does not rule out a hematolymphoid tumor. CD-45 antibody is expressed almost exclusively by cells of hematopoietic lineage and is present in most benign and malignant lymphocytes as well as plasma cell precursors.

CD45 (Leukocyte Common Antigen, LCA)

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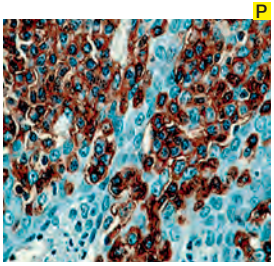

Tonsil expressing strong LCA positivity using DAB chromogen

Clone:	PD7/26/16 & 2B11
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Human lymphocytes
Specificity:	CD45
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM111-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM111-10M**
Xmatrx®	**AX111-YCD, AX111-50D**
Recommended Positive Control:	**FG-111M**
Recommended Barrier Control:	**FB-111M**

This antibody against CD45 (Leukocyte Common Antigen) recognizes the 200 kD antigen found on lymphoid cells, macrophages, histiocytes, and neutrophils. CD45 is helpful in determining the leukocytic nature of anaplastic tumors. Combined with other antibodies such as those to cytokeratins and S-100 protein, this monoclonal antibody to leukocyte common antigen can be used in the characterization of undifferentiated large cell neoplasms. Most neoplastic B cells and T cells stain positive in leukemia and in non-Hodgkins lymphomas, whereas most neoplastic myeloid and erythroid cells are negative. This antibody labels lymphoid cells and to a lesser extent macrophages, histiocytes, and granulocytes.

CD45 (Leukocyte Common Antigen, LCA)

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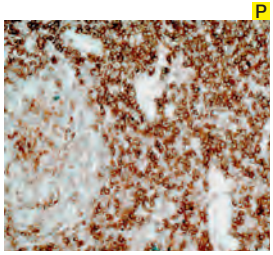


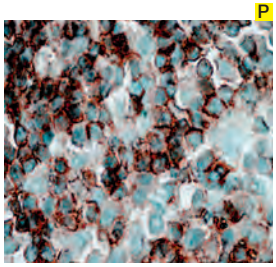
Spleen Tissue stained with Anti-CD45 using DAB chromogen

Clone:	LJ 27.9
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human lymphocytes
Specificity:	Leukocyte Common Antigen
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM338-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM338-10M**
Xmatrx®	**AX338-YCD, AX338-50D**
Concentrated:	**MU338-UC, MU338-5UC**
Recommended Positive Control:	**FG-338M**
Recommended Barrier Control:	**FB-338M**

The Leukocyte Common Antigen consists of a family of heavily glycosylated glycoproteins of apparent MW 180-240kD. CD45 may function in the regulation of L-selectin (CD62L), in regulation of B-lymphocyte negative and positive selection and in T-cell activation. It stains lymphocytes, monocytes, eosinophils, and also neoplastic cells of lymphoid origin. Neoplastic B cells and T cells in leukemia and in non-Hodgkin's lymphomas stain positive. This antibody stains CD45 antigen in membrane and cytoplasm of the majority of human leukocytes.

CD45 Cocktail (Leukocyte Common Antigen, LCA)



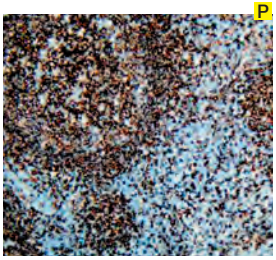
LCA positivity on Anaplastic Large Cell Lymphoma stained using DAB chromogen

Clone:	MEM55+LJ 27.9
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human lymphocytes
Specificity:	CD45
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM371-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM371-10M**
Xmatrx®	**AX371-YCD, AX371-50D**
Concentrated:	**MU371-UC, MU371-5UC**
Recommended Positive Control:	**FG-371M**
Recommended Barrier Control:	**FB-371M**

CD45 (LCA) is a transmembrane protein-tyrosine-phosphatase. The LCA family includes a group of proteins present on all mature B and T lymphocytes, thymocytes, macrophages, spleen, lymph node, chronic lymphatic leukemia cells, bone marrow, thymus, and granulocytes. It is absent in brain, kidney, liver, heart, erythrocytes, platelets, and normal serum. This antibody may be useful in the evaluation of malignant lymphoma and nonlymphoid tumors. Neoplastic B and T cells in leukemia and in non-Hodgkin's lymphoma stain positive and hence can be distinguished from sarcomas and carcinomas. This antibody stains CD45 antigen on the membrane of most leukocytes.

CD45RA (B Cell)



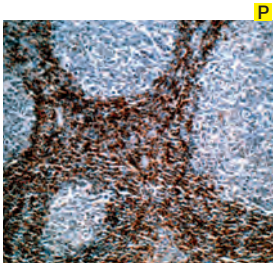
Tonsil stained with Anti-CD45R using DAB chromogen

Clone:	MB1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Hodgkin's lymphoma cell line DEV
Specificity:	CD45RA
Localization:	Membrane
Pre-treatment:	None
Manual/i6000:	None
Xmatrx:	None

Ready-to-Use (Manual):	**AM157-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM157-10M**
Xmatrx®	**AX157-YCD, AX157-50D**
Recommended Positive Control:	**FG-157M**
Recommended Barrier Control:	**FB-157M**

CD45RA is a restricted isoform of LCA of about 220 kD. MB1 recognizes a membrane-bound antigen which occurs on all B cells with the exception of plasma cells, and on some mature T cells. The antigen which is identified by this monoclonal antibody is not present on immature T cells. This antibody stains CD45RA antigen on the membrane of all B cells with the exception of plasma cells and some mature T cells.

CD45RB



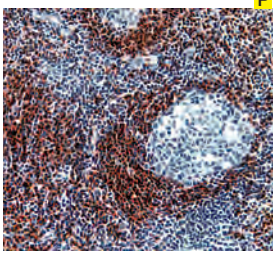
Tonsil stained with Anti-CD45RB using DAB chromogen

Clone:	MEM55
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human lymphocytes
Specificity:	CD45RB antigen
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM320-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM320-10M**
Xmatrx®	**AX320-YCD, AX320-50D**
Concentrated:	**MU320-UC, MU320-5UC**
Recommended Positive Control:	**FG-320M**
Recommended Barrier Control:	**FB-320M**

CD45RB, which includes three glycoproteins with molecular mass of 190, 205 and 220 kD, has been found to belong to the CD45 family. Monoclonal antibody MEM55 can be used to stain CD45RB antigen on most T cells, B cells, monocytes, and macrophages. The cellular distribution of CD45RB is very similar to that of other conventional CD45 antibodies, except that some cells, such as Langerhan's cells and a small subset of T cells, are negative. This antibody stains the CD45RB antigen, the isoform of the leukocyte common antigen encoded by exon B.

CD45RC (T Cell)



T Cells in Tonsil stained with Anti-CD45RC using DAB chromogen

Clone:	MT2
Isotype:	IgG1
Source:	Mouse
Immunogen:	Lymph node involving chronic lymphatic leukemia
Specificity:	CD45RC
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM156-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM156-10M**
Xmatrx®	**AX156-YCD, AX156-50D**
Concentrated:	**MU156-UC, MU156-5UC**
Recommended Positive Control:	**FG-156M**
Recommended Barrier Control:	**FB-156M**

Clone MT2 has previously been described as CD45RA but due to its reactivity with transfectants and its identical staining pattern with ORTH75E4 it is now recognized as CD45RC. Clone MT2 reacts with membrane-bound antigen which is present on mature, non-activated T and B cells. It reacts with medullary thymocytes, with mantle zone lymphocytes in follicles of lymph nodes and spleen, with lymphocytes of the paracortex, with peripheral blood B cells, with T suppressor/cytotoxic cells and NK cells. This clone is used for differentiation of non-Hodgkin lymphomas.

CD45RO (T Cell)

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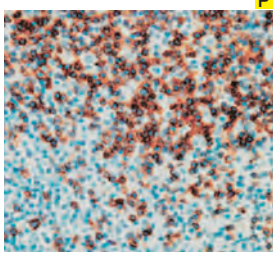

Tonsil stained with Anti-CD45R0 using DAB chromogen

Clone:	UCHL-1
Isotype:	IgG 2a Kappa
Source:	Mouse
Immunogen:	IL-2 dependent T cell line CA1
Specificity:	T cells
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM113-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM113-10M**
Xmatrx®	**AX113-YCD, AX113-50D**
Concentrated:	**MU113-UC, MU113-5UC**
Recommended Positive Control:	**FG-113M**
Recommended Barrier Control:	**FB-113M**

This antibody recognizes a 185 kD molecule (CD45RO) which occurs on mature activated T cells, most thymocytes, and a sub-population of resting T cells within both the CD4 and CD8 subsets. UCHL-1 shows no reactivity with normal B or NK cells, but will react with granulocytes and monocytes. This antibody can be used as a marker of T cell lymphomas and other T cell neoplasms. The antigen has been shown to be immunologically unrelated to the lymphocyte-function-associated antigen (LFA-1), which has a similar molecular weight. This antibody stains the membrane and sometimes the cytoplasm of CD45RO positive cells.

CD48

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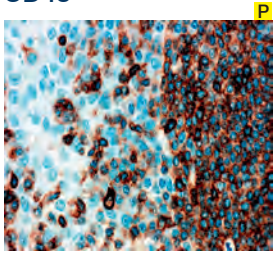

Tonsil stained with anti-CD48 using DAB chromogen

Clone:	EP148
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD48 protein
Specificity:	CD48 protein
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN721-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN721-10ME**
Xmatrx®	**AY721-YCDE, AY721-50DE**
Concentrated:	**NU721-UCE, NU721-5UCE**
Recommended Positive Control:	**FG-721NE**
Recommended Barrier Control:	**FB-721NE**

CD48 (BLAST1) is an activation-associated, glycosylphosphatidylinositol (GPI)-anchored cell surface glycoprotein expressed primarily in mitogen-stimulated human lymphocytes. CD48 is expressed on T cells, B cells, thymocytes and splenocytes. Both normal and malignant white blood cells express CD48 on their membrane surface, but greater than 95% of CD34+ hematopoietic stem cells do not express CD48. CD48 is expressed at higher levels on human Burkitt's lymphoma cell lines, Raji and most acute myeloid leukemia cells with phenotype CD34-/CD13+/CD33+.

CD53

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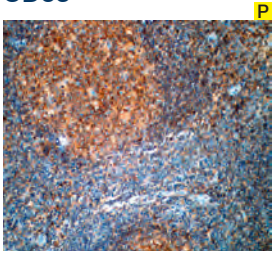

Tonsil stained with anti-CD53 using DAB chromogen

Clone:	EP179
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD53
Specificity:	CD53
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN734-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN734-10M**
Xmatrx®	**AY734-YCD AY734-50D**
Concentrated:	**NU734-UC, NU734-5UC**
Recommended Positive Control:	**FG-734N**
Recommended Barrier Control:	**FB-734N**

Leukocyte surface antigen CD53 is a protein that in humans is encoded by the CD53 gene. The protein encoded by this gene is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. The function of this family in a number of different cell types may be involved in transmembrane signal transduction and regulation of cell proliferation and differentiation, or both. CD53 is broadly expressed on leukocytes, including B cells, T cells, monocytes and granulocytes. It has been demonstrated to be a specific and reliable marker for leukocytes. This antibody strongly labels normal and neoplastic cells with hematopoietic origin.

CD56 (Natural Killer Cell, NCAM)

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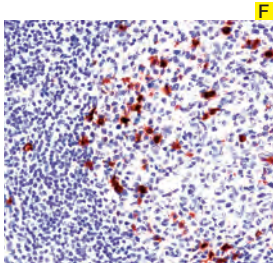


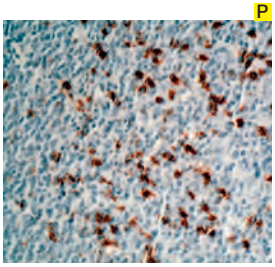
Frozen Tonsil stained with Anti-CD56 using AEC chromogen

Clone:	NKH-1
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Human chronic myeloid leukemia cells
Specificity:	CD56 (NKH-1)
Localization:	Membrane
Pre-treatment:	None

Ready-to-Use (Manual):	**AM268-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM268-10M**
Xmatrx®	**AX268-YCD, AX268-50D**
Concentrated:	**MU268-UC, MU268-5UC**
Recommended Positive Control:	**FG-268M**
Recommended Barrier Control:	**FB-268M**

The NKH-1 antigen is present on a subpopulation of 10 to 15% of human peripheral blood lymphocytes (PBL) and is expressed on all cells which mediate non-MHC restricted cytotoxicity. Therefore, it is a pan natural killer (NK) cell antigen. This antibody reacts with one of the three distinct epitopes that have been identified: the NKH1b epitope. It can also be of value in the immunophenotyping of tumors derived from neuroectodermal tissue. This antibody stains CD56 (NKH-1) on peripheral blood large granular lymphocytes in frozen tissue sections.

CD57 (Natural Killer Cell)



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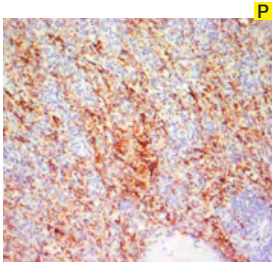
Tonsil stained with Anti-CD57 using DAB chromogen

Clone:	NK-1
Isotype:	IgM
Source:	Mouse
Specificity:	CD57 (natural killer cell, also called HNK1)
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM314-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM314-10M**
Xmatrx®	**AX314-YCD, AX314-50D**
Concentrated:	**MU314-UC, MU314-5UC**
Recommended Positive Control:	**FG-314M**
Recommended Barrier Control:	**FB-314M**

Monoclonal antibody NK-1recognizes CD57, also called HNK-1 or Leu 7 antigen. It is a 110 kD myeloid, cell-associated surface glycoprotein. The antigen is common to leukocytes and neuroectodermal cells. It is present in most cancers with neuronal as well as glial characteristics. Tumors and normal cells derived from the neuroectoderm or the APUD (diffuse neuroendocrine system) tumors also express this antigen. Anti-natural killer cell antibodies used in combination with anti-S-100 antibodies aid in the differentiation of Schwann cell neoplasms from histologically similar fibrosarcomas. This antibody stains CD57 on the membrane of natural killer cells in both normal and abnormal tissues.

CD61/Integrin β3



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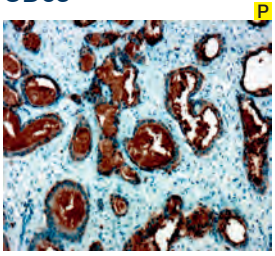
Spleen stained with CD61/Integrin β3

Clone:	ITGB3/2145
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Recombinant human ITGB3 protein fragment
Specificity:	CD61
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM942-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM942-10ME**
Xmatrx®	**AX942-50DE, AX942-YCDE**
Concentrated:	**MU942-UCE, MU942-5UCE**
Recommended Positive Control:	**FG-942ME**
Recommended Barrier Control:	**FB-942ME**

Monoclonal anti-CD61 reacts with human integrin beta 3 (GPIIIa, vitronectin receptor beta chain). The protein detectable is a complex of CD41 and CD61. The apparent molecular weight of the GPIIIa by SDS-PAGE is 105kDa reduced and 90kDa unreduced. Ligands are fibronectin, fibrinogen, von Willebrand factor, vitronectin and thrombospondin. Residues 237-248 of GPIIIa or CD61 are critical in adhesive protein binding. Integrins are integral cell-surface proteins composed of an alpha chain and a beta chain. A given chain may combine with multiple partners resulting in different integrins. Integrin beta 3 is found along with the alpha IIb chain in platelets. Integrins are known to participate in cell adhesion as well as cell-surface mediated signaling.

CD63



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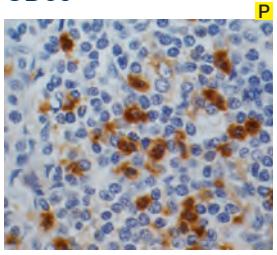
Prostate tissue stained with anti-CD63 using DAB chromogen

Clone:	EP211
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD63
Specificity:	CD63
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN720-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN720-10ME**
Xmatrx®	**AY720-YCDE, AY720-50DE**
Concentrated:	**NU720-UCE, NU720-5UCE**
Recommended Positive Control:	**FG-720NE**
Recommended Barrier Control:	**FB-720NE**

CD63, a 53 kD lysosomal membrane glycoprotein is expressed on activated platelets, monocytes and macrophages, also weakly expressed on granulocytes, T cell and B cells. It is strongly expressed in early melanoma, breast carcinoma, merkel cell carcinoma, astrocytoma and lung adenocarcinoma. Recent reports also indicate that CD63 is a good prognostic biomarker for human astrocytomas and earlier stages of lung carcinoma.

CD66



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Reactive node stained with Anti-CD66 using DAB chromogen

Clone:	BY114
Isotype:	IgG
Source:	Mouse
Immunogen:	Human B cell lymphoma
Specificity:	CD66 antigen
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM325-5M**
Ready-to-Use (Automated):	
Xmatrx®	**AX325-YCD, AX325-50D**
Recommended Positive Control:	**FG-325M**
Recommended Barrier Control:	**FB-325M**

Clone BY114, also known as NCA90 (Non-cross reacting antigen 90), is a unique monoclonal antibody that recognizes CD66CE which is a 90 kD antigen found principally on neutrophils. In contrast to many antibodies which recognize granulocyte-associated antigens present on other leukocytes, this antibody recognizes only granulocytes. The anti-CD66 monoclonal antibody, therefore, is very useful for differentiation of normal and neoplastic cells of granulocyte origin. Monoclonal antibody BY114 can be used to stain neutrophils in tonsil, spleen, liver, kidney, pancreas, and lung. This antibody stains phosphatidylinositol (PI) linked protein on granulocyte and squamous epithelium.

CD68

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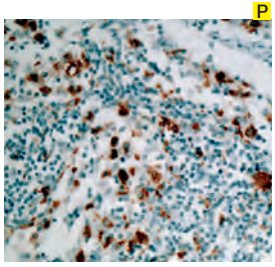

Lymph node stained with Anti-CD68 using DAB chromogen

Clone:	KP1
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Lysosomal granules from human lung macrophage
Specificity:	Macrophages
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM416-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM416-10M**
Xmatrx®	**AX416-YCD, AX416-50D**
Concentrated:	**MU416-UC, MU416-5UC**
Recommended Positive Control:	**FG-416M**
Recommended Barrier Control:	**FB-416M**

CD68 antigen, a 110-kD type 1 membrane glycoprotein, appears in endosomes or lysosomes (long variant) and to a lesser extent on the cell surface (short variant). It is highly expressed by blood monocytes and tissue macrophages. It is also reported to be expressed in immature myeloid cells, lymphoma, many tumor cell lines, and some epithelial tumors, although the labeling is usually less intense than in macrophages. Clone KP1 reacts strongly with a fixative-resistant epitope of CD68 protein that is expressed by virtually all macrophages of the human body. The CD68 antibody can be used as part of a panel in the evaluation of poorly differentiated neoplasms in cytological materials.

CD68

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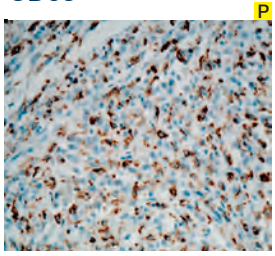

Histocytoma stained with Anti-CD68 using DAB chromogen

Clone:	CD68/G2
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human CD68
Specificity:	CD68
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM549-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM549-10M**
Xmatrx®	**AX549-YCD, AX549-50D**
Concentrated:	**MU549-UC, MU549-5UC**
Recommended Positive Control:	**FG-549M**
Recommended Barrier Control:	**FB-549M**

The CD68 antigen is a heavily glycosylated transmembrane protein of 87-115 kD which is specifically expressed by tissue macrophages, Langerhans cells and at low levels by dendritic cells. This antibody is capable of staining monocytes, Kupffer cells, osteoclasts, granulocytes and their precursors; Lymphomas are negative or show a few granules. This antibody may be useful for the identification of myelomonocytic and histiocytic tumors. CD68 may help to distinguish malignant fibrous histiocytoma from other pleomorphic sarcomas. However, since CD68 detects a formalin-resistant epitope that may be associated with lysosomal granules, other lysosome-rich cells may also produce positive results.

CD71 (Transferrin Receptor)

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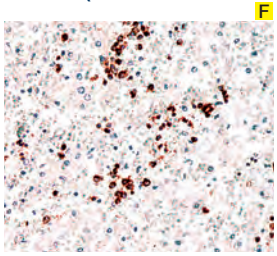

Frozen Liver stained with Anti-CD71 using DAB chromogen

Clone:	T9
Isotype:	IgM Kappa
Source:	Mouse
Immunogen:	Human T cell chronic lymphocytic leukemia cells
Specificity:	CD71 (Transferrin Receptor T9)
Localization:	Membrane
Pre-treatment:	None

Ready-to-Use (Manual):	**AM269-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM269-10M**
Xmatrx®	**AX269-YCD, AX269-50D**
Recommended Positive Control:	**FG-269M**
Recommended Barrier Control:	**FB-269M**

This antibody reacts with CD71 antigen (also known as T9 or Transferrin Receptor), a homodimeric type II membrane protein consisting of two identical subunits of approximately 95 kD covalently linked by two intermolecular disulfide bonds. This antigen has also been identified on the endothelium of brain capillaries, on carcinomas and sarcomas of various origins as well as on both high- and low-grade malignant lymphomas. This antibody stains the T9 antigen activated lymphocytes, myelocytes, and nucleated erythrocyte precursors in frozen tissue sections.

CD71 (Transferrin Receptor)

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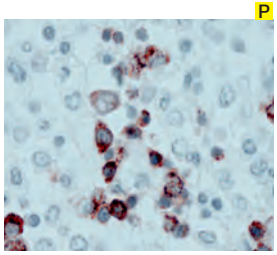


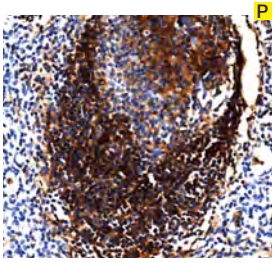
Tonsil stained with Anti-CD71 using DAB chromogen

Clone:	H68.4
Isotype:	IgG1
Source:	Mouse
Immunogen:	Baculovirus-expressed, recombinant human Transferrin Receptor
Specificity:	CD71 (Transferrin Receptor)
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM354-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM354-10M**
Xmatrx®	**AX354-YCD, AX354-50D**
Concentrated:	**MU354-UC, MU354-5UC**
Recommended Positive Control:	**FG-354M**
Recommended Barrier Control:	**FB-354M**

This antibody reacts with CD71 antigen (also known as T9 or Transferrin Receptor), a homodimeric type II membrane protein consisting of two identical subunits of approximately 95 kD covalently linked by two intermolecular disulfide bonds. Transferrin Receptor is present on 10% of thymocytes, activated lymphocytes, myelocytes, and nucleated erythrocyte precursors. Broad distribution of Transferrin Receptor (TR) has been observed on carcinomas and sarcomas of various origins and malignant lymphomas. Clone H68.4 is specifically directed against the human Transferrin Receptor cytoplasmic tail. This antibody stains the cytoplasm and membrane of activated lymphocytes and erythroid precursors.

CD73



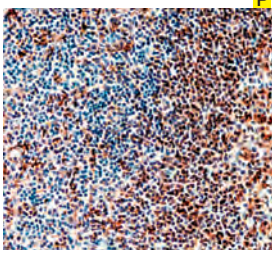
Tonsil stained with Anti-CD73 using DAB chromogen

Clone:	1D7
Isotype:	IgG
Source:	Mouse
Immunogen:	Purified recombinant fragment of NT5E expressed in E. Coli.
Specificity:	Human CD27
Localization:	Cell Membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM904-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM904-10ME**
Xmatrx®	**AX904-YCDE, AX904-50DE**
Concentrated:	**MU904-UCE, MU904-5UCE MU904-1UCE**
Recommended Positive Control:	**FG-904M**
Recommended Barrier Control:	**FB-904M**

CD73 or NT5E (ecto-5'-nucleotidase) is a GPI-anchored enzyme that generates extracellular adenosine, a potent immunosuppressive metabolite in the tumor microenvironment. CD73–adenosinergic pathway contributes to tumor immune escape in animal mouse models of cancer and was also shown to suppress antitumor T cells in human ovarian cancer. Monoclonal antibody treatment targeting CD73 has been shown to delay ovarian tumor growth in mice and to rescue human T-cell functions when co-cultured with CD73-expressing human ovarian cancer cells. CD73 over expression was demonstrated in various cancer including breast cancer, colon cancer, glioma, leukemia, melanoma, ovarian cancer, pancreatic cancer, prostate cancer and thyroid cancer.

CD74 (B Cell)



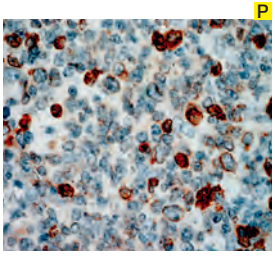
Tonsil stained with Anti-CD74 using DAB chromogen

Clone:	LN2
Isotype:	IgG1
Source:	Mouse
Immunogen:	Nuclei from diffuse histiocytic lymphoma cells (SU-DHL-4)
Specificity:	CD74
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM153-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM153-10M**
Xmatrx®	**AX153-YCD, AX153-50D**
Concentrated:	**MU153-UC, MU153-5UC**
Recommended Positive Control:	**FG-153M**
Recommended Barrier Control:	**FB-153M**

LN2 recognizes the 35 kD Class II invariant chain expressed in the nuclear membrane and cytoplasm of B lymphocytes and is suitable for differentiating between B-cell and T-cell lymphomas. It reacts with a nuclear membrane antigen expressed by B cells of mantle zones and germinal centers, and with the nuclear membrane of interdigitating cells in lymph nodes. It also reacts with Reed-Sternberg cells and their variants in Hodgkin's disease, and sporadically with antigens expressed by tumor cells of epithelial origin. This antibody stains nucleus, membrane and cytoplasm of B-cells.

CD79a



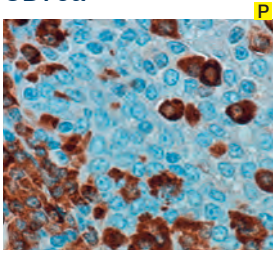
Tonsil tissue stained with Anti-CD79a using DAB chromogen

Clone:	11E3
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Recombinant CD79a protein internal domain
Specificity:	CD79a antigen
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM414-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM414-10M**
Xmatrx®	**AX414-YCD, AX414-50D**
Concentrated:	**MU414-UC, MU414-5UC**
Recommended Positive Control:	**FG-414M**
Recommended Barrier Control:	**FB-414M**

CD79a, also known as Ig-alpha, mb-1 membrane glycoprotein, is a type I membrane glycoprotein with a total of 226 amino acids and a molecular weight of 47 kD. CD79a forms a heterodimer with CD79b through disulfide-bonds and further forms a complex in a noncovalent fashion with membrane immunoglobulins. Both CD79a and CD79b are expressed almost exclusively on B cells and B-cell neoplasms. In addition, CD79a and CD79b antibodies are useful markers in the evaluation of precursor B-acute lymphoblastic leukemia (pre-B-ALL) because many of these tumors are negative for other B-cell markers, such as CD20 and CD45RA.

CD79a



Tonsil stained with anti-Human CD79a using DAB chromogen

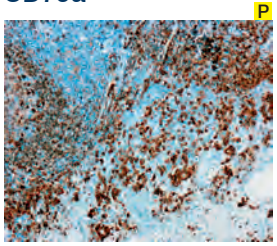
Clone:	SP18
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from N-terminus of human CD79a protein
Specificity:	Human CD79a
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN767-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN767-10M**
Xmatrx®	**AY767-YCD, AY767-50D**
Concentrated:	**NU767-UC, NU767-5UC**
Recommended Positive Control:	**FG-767N**
Recommended Barrier Control:	**FB-767N**

CD79 consist of two proteins, CD79a (mb-1) and CD79b (B29). CD79a recognizes the Ig-alpha protein, and CD79b recognizes the Ig-beta protein of the B-cell antigen component of the B-lymphocyte antigen receptor. The CD79a protein is present on the surface of B-cells throughout their life cycle, and is absent on all other healthy cells and is an excellent marker for identification of normal and neoplastic B lymphocytes. The protein remains present when B-cells transform into active plasma cells, and is also present in virtually all B-cell neoplasms, including B-cell lymphomas, plasmacytomas, and myelomas. It is also present in abnormal lymphocytes associated with some cases of Hodgkin's disease.

CD79a

P



Lymph node stained with anti-CD79a using DAB chromogen

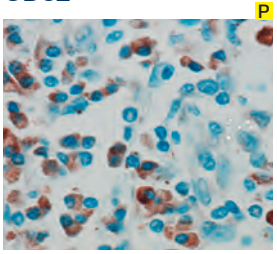
Clone:	EP82
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from the extracellular region of human CD79a protein
Specificity:	CD79a
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN719-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN719-10M**
Xmatrx®	**AY719-YCD, AY719-50D**
Concentrated:	**NU719-UC, NU719-5UC**
Recommended Positive Control:	**FG-719N**
Recommended Barrier Control:	**FB-719N**

CD79 consist of two proteins, CD79a (mb-1) and CD79b (B29). CD79a recognizes the Ig-alpha protein, and CD79b recognizes the Ig-beta protein of the B-cell antigen component of the B-lymphocyte antigen receptor. CD79a is an excellent marker for identification of normal and neoplastic B lymphocytes. It has been found to be co-expressed with CD3 in 10% of cases of T-lymphoblastic leukemia/lymphoma. Antibodies to CD79α may also be useful in the differential diagnosis of Hodgkin's disease.

CD82

P



Adeno cancer stained with anti-CD82

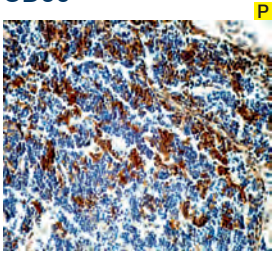
Clone:	EP160
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the C-terminus in the intracellular domain of human CD82 protein
Specificity:	Human CD82
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN757-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN757-10M**
Xmatrx®	**AY757-YCD, AY757-50D**
Concentrated:	**NU757-UC, NU757-5UC**
Recommended Positive Control:	**FG-757N**
Recommended Barrier Control:	**FB-757N**

CD82, also known as metastasis suppressor Kangai-1 (KAI1), is a member of the tetraspanin protein family and is a metastasis suppressor implicated in biological processes ranging from fusion, adhesion and migration to apoptosis and cell-morphology alterations. In tumors, the expression of CD82 has been shown to be downregulated in tumor progression. CD82 can be activated by p53 through a consensus binding sequence in the promoter. Loss of p53 function, which is commonly observed in many types of cancers, may lead to the downregulation of the CD82 gene. The correlation between lower or no expression of CD82 and poor tumor prognosis is observed in many types of tumors, including prostate, breast, colon, stomach, bladder, lung, liver, pancreas, and ovary tumors.

CD90

P



Thymus stained with anti-CD90

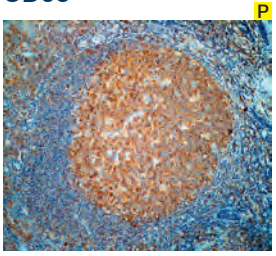
Clone:	EP56
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues near the N-terminus of human CD90 protein
Specificity:	Human CD90 protein
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN733-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN733-10M**
Xmatrx®	**AY733-YCD, AY733-50D**
Concentrated:	**NU733-UC, NU733-5UC**
Recommended Positive Control:	**FG-733N**
Recommended Barrier Control:	**FB-733N**

CD90 is expressed on thymocytes, neurons, glial cells, endothelial cells, fibroblasts, fetal liver cells and hematopoietic stem cells in normal bone marrow and cord blood. Thy-1 has been used as a marker for a variety of stem cells and for the axonal processes of mature neurons. CD90 is associated with unfavorable clinical and biological features in acute myeloid leukemia. In prostate cancer, CD90 has been reported to be overexpressed in cancer associated fibroblasts and serves as a marker for prostate cancer-associated stroma.

CD95

P



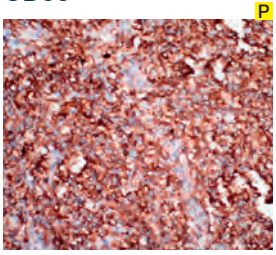
Tonsil stained with anti-CD95 using DAB chromogen

Clone:	EP208
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD95 protein
Specificity:	CD95
Localization:	Cytoplasm and membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN742-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN742-10ME**
Xmatrx®	**AY742-YCDE, AY742-50DE**
Concentrated:	**NU742-UCE, NU742-5UCE**
Recommended Positive Control:	**FG-742NE**
Recommended Barrier Control:	**FB-742NE**

The CD95 (Fas) protein is a cell surface receptor belonging to the tumor necrosis factor (TNF) family that transduces death signaling on engagement by multimeric Fas ligand (CD95L), of which there are eight in its membrane –bound form or in its soluble form resulting from cleavage by a putative metalloproteinase. CD95 is a widely expressed protein. During embryonic and postembryonic development, many cells die by means of apoptosis. This plays a major role in determining morphological and functional maturity in a variety of systems, including the formation of the neural network and clonal deletion of autoreactive T cells. The Fas death system also plays important roles in various apoptosis conditions such as those evoked by irradiation, chemotherapeutic agents and viral infections. The expression of CD95 serves as a prognostic marker in predicting the outcome of disease progression and treatment in many types of tumors.

CD99



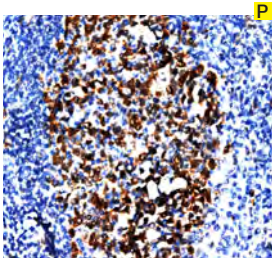
Ewing sarcoma stained with anti-Human CD99using DAB chromogen

Clone:	EP8
Isotype:	IgG
Source:	Rabbit
Immunogen:	Residues of human CD99 protein.
Specificity:	Human CD99
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN850-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN850-10M**
Xmatrx®	**AY850-YCD, AY850-50D**
Concentrated:	**NU850-UC, NU850-5UC**
Recommended Positive Control:	**FG-850N**
Recommended Barrier Control:	**FB-850N**

CD99 is a transmembrane glycoprotein, also known as MIC2. It is involved in T cell adhesion, leukocyte migration and differentiation of primitive neuroectodermal cell. CD99 labels lymphocyte, ovarian granulosa cells, pancreatic islet cells, sertoli cells, CNS ependymal cells and endothelial cells. CD99 has been useful in diagnosis of Ewing's sarcoma, sex cord-stromal tumor, endocrine tumor of pancreas. Additionally, it is found in a subset of other tumors including lymphoblastic lymphoma, breast carcinoma and other malignancies.

CDK2



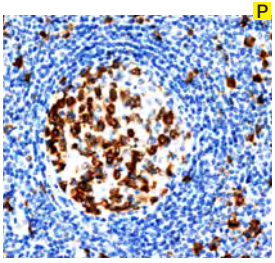
Tonsil stained with Anti-CDK2 using DAB chromogen

Clone:	SP80
Isotype:	IgG
Source:	Rabbit
Immunogen:	Synthetic peptide corresponding to C-terminus of human CDK2 protein
Specificity:	Human CDK2
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN906-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN906-10ME**
Xmatrx®	**AY906-YCDE, AY906-50DE**
Concentrated:	**NU906-UCE, NU906-5UCE NU906-1UCE**
Recommended Positive Control:	**FG-906N**
Recommended Barrier Control:	**FB-906N**

CDK2 (Cyclin-dependent kinase 2), also known as cell division protein kinase 2, is a serine/threonine protein kinases that participate in cell cycle regulation and is especially critical during the G1 to S phase transition. CDK2 phosphorylates a large number of proteins involved in cell cycle progression (e.g. p27KIP1 and RB), DNA replication (e.g., replication factors A and C), histone synthesis (e.g., NPAT), centrosome duplication (e.g., nucleophosmin), among other processes. CDK2 is known to phosphorylate Akt on Ser477 and Thr479 promoting its activation at a specific stage during cell cycle progression (5). Recently, it has become clear that deregulation of CDK2 also occurs frequently in certain types of cancer. Increased CDK2 activity was shown to decreases risk in colon cancer, but elevates poor outcome in specific tumors, including low grade glioma, kidney, thyroid, adrenocortical and prostate cancer.

CDK1



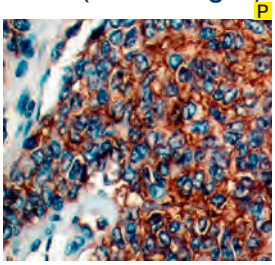
Tonsil stained with Anti-CDK1 using DAB chromogen

Clone:	A17.1.1
Isotype:	IgG
Source:	Mouse
Immunogen:	C-Terminal 2/3 of Xenopus CDC2 expressed in E. coli
Specificity:	Human, mouse, rat, chicken CDK1
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM905-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM905-10ME**
Xmatrx®	**AX905-YCDE, AX905-50DE**
Concentrated:	**MU905-UCE, MU905-5UCE MU905-1UCE**
Recommended Positive Control:	**FG-905M**
Recommended Barrier Control:	**FB-905M**

CDK1 (Cyclin-dependent kinase 1), also known as CDC2 (cell division cycle protein 2 homolog) is a highly conserved protein that functions as a serine/threonine kinase, and is a key player in cell cycle regulation and the only CDK that can initiate the onset of mitosis. At the onset of mitosis activation of CDK1 occurs rapidly. Subsequently, CDK1 forms complexes with its cyclin partners (Cyclin A2 and Cyclin B1) and phosphorylates a variety of target substrates (over 75 have been identified in budding yeast), leading to nuclear envelope breakdown, chromosome condensation, mitotic spindle assembly and cell cycle progression. Derangement of p53 signaling or of DNA damage checkpoints indi¬rectly leads to the deregulation of CDK1, and high cyclin B1 expression is generally associated with a more aggressive cancer phenotype. Diseases associated with CDK1 include Breast Cancer and Hepatocellular Carcinoma.

CD99 (MIC2 Antigen)



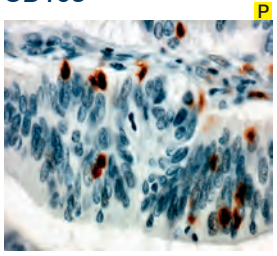
Ewings sarcoma stained with Anti-CD99 stained using DAB chromogen

Clone:	HO36.1.1
Isotype:	IgM
Source:	Mouse
Immunogen:	Purified E-rosette forming cells from human peripheral blood lymphocytes
Specificity:	CD99 (MIC2 antigen)
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM355-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM355-10M**
Xmatrx®	**AX355-YCD, AX355-50D**
Concentrated:	**MU355-UC, MU355-5UC**
Recommended Positive Control:	**FG-355M**
Recommended Barrier Control:	**FB-355M**

CD99 is a 32 kD membrane glycoprotein expressed by human thymocytes, most T-ALL cells, some red blood cells, and the small cell round tumors of Ewing's sarcoma and peripheral neuroectodermal tumors. The CD99 protein is known to be involved in T-cell-adhesion events. CD99 has been found to be expressed in lymphoblastic lymphomas, large cell lymphomas, and many cases of pediatric acute lymphocytic leukemia. This antibody stains CD99 antigen in human thymocytes and some T-ALL isolates and other positive cells.

CD103



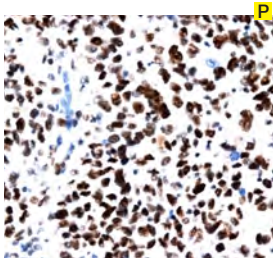
Colon carcinoma stained with anti-CD103 using DAB chromogen

Clone:	EP206
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD103 protein
Specificity:	CD103
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN739-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN739-10ME**
Xmatrx®	**AY739-YCDE, AY739-50DE**
Concentrated:	**NU739-UCE, NU739-5UCE**
Recommended Positive Control:	**FG-739NE**
Recommended Barrier Control:	**FB-739NE**

CD103, also known as integrin alpha E (ITGAE), is an integrin protein that in humans is encoded by the ITGAE gene. CD103 is expressed on intraepithelial lymphocytes in mucosal areas, including lung and GI tract. In malignancies, CD103 is expressed on more than 95% of intraepithelial CD8+ cells and on 40% of mucosa-associated T cells, whereas less than 2% of resting blood lymphocytes are CD103-positive. In several malignant conditions, such as T-cell lymphomas and hairy cell leukemia, the cells express CD103.

CDK9



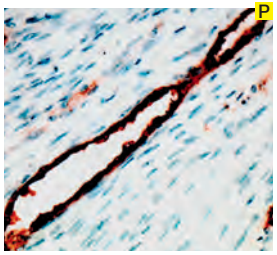
Cervical cancer stained with Anti-CDK9 using DAB chromogen

Clone:	K.513.1
Isotype:	IgG
Source:	Rabbit
Immunogen:	Synthetic peptide corresponding to residues near the carboxy terminus of human CDK9
Specificity:	Human, mouse, rat, bovine, dog CDK9
Localization:	Nucleus
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN908-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN908-10ME**
Xmatrx®	**AY908-YCDE, AY908-50DE**
Concentrated:	**NU908-UCE, NU908-5UCE NU908-1UCE**
Recommended Positive Control:	**FG-908N**
Recommended Barrier Control:	**FB-908N**

CDK9 (Cyclin-dependent kinase 9), is a serine/threonine kinase that forms the catalytic core of the positive transcription elongation factor b (P-TEFb). This enzyme is critical for stimulating transcription elongation of most protein coding genes, including key developmental and stimulus-responsive genes, by RNA polymerase II (RNAPII). CDK9 is not a typical Cdc-2 like kinase and it does not act in cell cycle regulation processes; rather, it acts in differentiation processes. Targeting CDK9 with small molecule inhibitors represents a viable strategy for the treatment of several diseases, indicated especially by the deregulation of CDK9 activity in cancers, cardiac hypertrophy, HIV infections and pathological inflammation. CDK9 inhibitors have demonstrated good antitumoral activity in vitro.Analyte Specific Reagent.

CD105



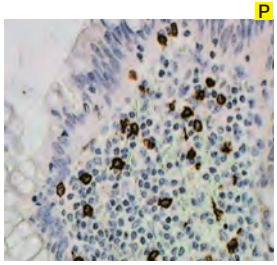
Uterine blood vessels stained with Anti-CD105 using DAB chromogen

Clone:	4G11
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Prokaryotic recombinant protein corresponding to a region of the external domain of the CD105 glycoprotein.
Specificity:	CD105
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM441-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM441-10M**
Xmatrx®	**AX441-YCD, AX441-50D**
Concentrated:	**MU441-UC, MU441-5UC**
Recommended Positive Control:	**FG-441M**
Recommended Barrier Control:	**FB-441M**

CD105 (endoglin) is a proliferation-associated and hypoxia-inducible protein abundantly expressed in angiogenic endothelial cells. It is a receptor for Transforming Growth Factor (TGF) -beta1 and -beta3 and modulates TGF-beta signaling by interacting with TGF-beta receptors I and/or II and hence driving tumor growth and metastasis. Endoglin (CD105) is a better marker to identify proliferating endothelium involved in tumor angiogenesis than pan-endothelial markers such as CD31, CD34 and Factor VIII etc. It can be used as a marker for microvessel density measurement and also in tumor imaging. This antibody stains membrane and cytoplasm of activated endothelial cells.

CD117



Appendix tissue stained with Anti-CD117 using DAB chromogen

Clone:	T595
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Recombinant protein corresponding to the three N-terminal C2-like extracellular domains.
Specificity:	c-Kit protein (CD117)
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM423-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM423-10M**
Xmatrx®	**AX423-YCD, AX423-50D**
Concentrated:	**MU423-UC, MU423-5UC**
Recommended Positive Control:	**FG-423M**
Recommended Barrier Control:	**FB-423M**

c-Kit (CD117) is a transmembrane, tyrosine kinase receptor and proto-oncogene product which is expressed on numerous diverse fetal and adult cells including hematopoietic cells, mast cells, melanocytes, germ cells, and the interstitial cells of Cajal. Its expression in tumors is also diverse.

CD117/c-Kit/SCF

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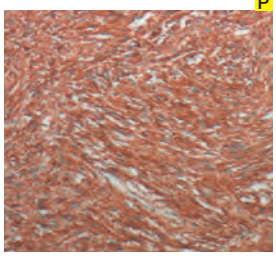

GIST stained with anti-Human CD117/c-Kit/SCFusing DAB chromogen

Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide from the cyto plasmicdomain of humanCD117 c-kitprotein
Specificity:	Human CD117/c-Kit/SCF
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR759-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR759-10R**
Xmatrx®	**AW759-YCD, AW759-50D**
Concentrated:	**PU759-UP, PU759-5UP**
Recommended Positive Control:	**FG-759P**
Recommended Barrier Control:	**FB-759P**

CD117 is a cytokine receptor expressed on the surface of hematopoietic stem cells as well as other cell types. CD117 recognizes a protein of 145kDa, which is identified as CD117/p145 kit. This rabbit polyclonal antibody does not interfere with the binding of SCF to c-kit. It precipitates both the unoccupied as well as the occupied form of c-kit. The binding of the stem cell factor (SCF) to the c-kit-encoded receptor tyrosine kinase(Type III) stimulates a variety of biochemical responses that culminate in cellular proliferation, migration, or survival. C-kit plays an important role in hematopoiesis, melanogenesis, and gametogenesis.

CD138

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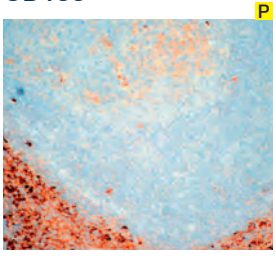

Tonsil stained with anti-Human CD138 using DAB chromogen

Clone:	EP201
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human CD138 protein, a member of the trans membrane heparin sulfate proteoglycan family, acts as an extra cellular matrix receptor
Specificity:	Human CD138
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN837-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN837-10M**
Xmatrx®	**AY837-YCD, AY837-50D**
Concentrated:	**NU837-UC, NU837-5UC**
Recommended Positive Control:	**FG-837N**
Recommended Barrier Control:	**FB-837N**

CD138, also known as Syndecan-1, is a member of the transmembrane heparan sulfate proteoglycan family, acts as an extracellular matrix receptor and is involved in many cellular functions, including cell-cell adhesion and cell-matrix adhesion. CD 138 expression is found in both hematopoietic and non-hematopoietic cells. In the hematopoietic system, CD138 labels plasma cells. It is an excellent marker for plasmacytic differentiation within the spectrum of hematologic malignancy. Among non-hematolymphoid cells, CD138 reactivity is observed in many types of epithelial cells and stoma cells in both normal and tumor tissues.

CD146

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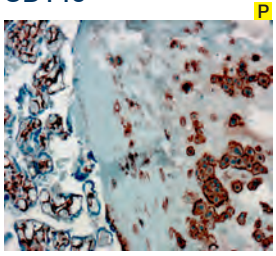

Placenta stained with anti-CD146 using DAB chromogen

Clone:	EP54
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human CD146 protein
Specificity:	CD146 protein
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN716-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN716-10M**
Xmatrx®	**AY716-YCD, AY716-50D**
Concentrated:	**NU716-UC, NU716-5UC**
Recommended Positive Control:	**FG-716N**
Recommended Barrier Control:	**FB-716N**

CD146 (cluster of differentiation 146) labels endothelial cells, smooth muscle cells, intermediate trophoblast, subpopulation of T cells, and peripheral neuronal cells. In tumor, CD146 is expressed on tumor cells derived from peripheral nerves system, melanoma and clear cell sarcoma. CD146 has been used as a marker for intermediate trophoblast. It has been reported that CD146 is useful in differentiation of mesothelioma (CD146 positive) and reactive mesothelium (CD146 negative). CD146 is associated with tumor progression and the development of metastasis in human malignant melanoma.

CD205

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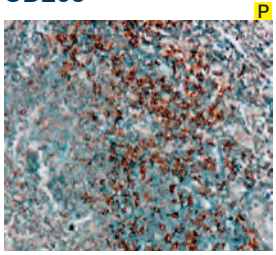

Tonsil stained with anti-CD205 using DAB chromogen

Clone:	EP176
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human CD205 protein
Specificity:	CD205
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN737-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN737-10ME**
Xmatrx®	**AY737-YCDE, AY737-50DE**
Concentrated:	**NU737-UCE, NU737-5UCE**
Recommended Positive Control:	**FG-737NE**
Recommended Barrier Control:	**FB-737NE**

CD205 is predominantly expressed by the thymic cortical epithelium and by dendritic cells (DC), but can also be detected at low levels in T and B lymphocytes and several other epithelial cell types. CD205 is a novel thymic epithelial marker that is important for the positive selection process of thymocytes. It is a sensitive and specific marker for thymoma, while the sensitivity to thymic carcinoma is lower than CD5 and CD117.

CD227 (Mucin 1)

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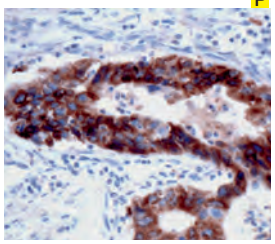

Mucinous adenocarcinoma stained with Anti-CD227 using DAB chromogen

Clone:	VU-4H5
Isotype:	IgG1
Source:	Mouse
Immunogen:	60mer tandem repeat of VTSAPDTRPAPGSTA -PPAHG,conjugated to BSA
Specificity:	CD227 (MUCIN 1)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM534-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM534-10M**
Xmatrx®	**AX534-YCD, AX534-50D**
Concentrated:	**MU534-UC, MU534-5UC**
Recommended Positive Control:	**FG-534M**
Recommended Barrier Control:	**FB-534M**

Mucins are a family of high molecular weight, heavily glycosylated proteins (glycoconjugates) produced by many epithelial tissues in vertebrates. CD227, also known as mucin 1, is a breast cancer associated mucin encoded by the Muc-1 gene. CD227 is expressed on most secretory epithelium, including mammary gland and some hematopoietic cells. This protein is over expressed abundantly in >90% breast carcinomas and metastases.

CDw75 (B Cell)

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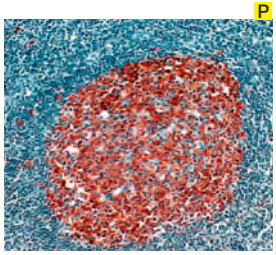

Tonsil stained with Anti-CDw75 using AEC chromogen

Clone:	LN1
Isotype:	IgM
Source:	Mouse
Immunogen:	Nuclei from pokeweed mitogen-stimulated peripheral blood lymphocytes
Specificity:	CDw75 antigen
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR1 elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM152-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM152-10M**
Xmatrx®	**AX152-YCD, AX152-50D**
Concentrated:	**MU152-UC, MU152-5UC**
Recommended Positive Control:	**FG-152M**
Recommended Barrier Control:	**FB-152M**

CDw75 is proposed as the ligand for CD22 mediating B-cell to B-cell interaction. Clone LN1 recognizes a sialoantigen on cell membranes. On tissue sections, it causes a marked reaction with the B lymphocytes in germinal centers, but only a faint reaction with B lymphocytes of the mantle zone in lymphatic tissues. LN1 also reacts with various types of epithelial cells, including cells of the distal renal tubules, breast, bronchus, prostate, and erythrocytes. This antibody stains CDw75 antigen on cell membranes of B lymphocytes in the germinal centers, certain epithelial cells, including cells of the distal renal tubules, breast, bronchus and prostate.

CDX-2

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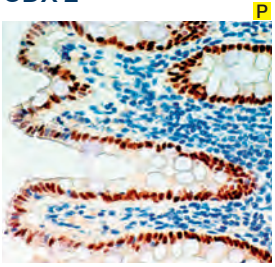

Intestine tissue stained with Anti-CDX2 using DAB chromogen

Clone:	CDX2-88
Isotype:	IgG 1 Kappa
Source:	Mouse
Immunogen:	A Balb/c mouse was immunized with a full-length CDX2 recombinant protein. Stable hybridomas were produced by fusion of spleen cells with P2/0 myeloma cell.
Specificity:	CDX2 protein
Localization:	Nucleus
Pre-treatment:	AR Citra Plus/EZ-AR 2
Manual/i6000:	HK080-5K
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM392-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM392-10M**
Xmatrx®	**AX392-YCD, AX392-50D**
Concentrated:	**MU392A-UC, MU392A-5UC**
Recommended Positive Control:	**FG-392M**
Recommended Barrier Control:	**FB-392M**

CDX2, a member of the caudal-related homeobox family, is an intestine-specific transcription factor that regulates both proliferation and differentiation in intestinal epithelial cells. It plays an important role in triggering cells towards the phenotype of differentiated villus enterocytes as well as in the maintenance of the phenotype. Clone CDX2-88 reacts with a conserved epitope of the 40kD CDX2 protein localized in the nucleus. It exclusively marks nuclei of colonic epithelial cells and colorectal cancers on formalin-fixed, paraffin-embedded tissue sections.

c-Kit/CD117

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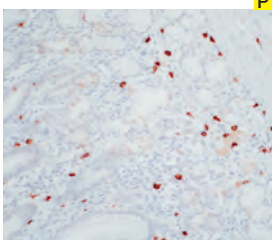


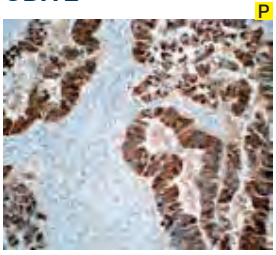
Stomach stained with anti-Human c-Kit/CD117using DAB chromogen

Clone:	EP10
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in the C-terminus of of human c-Kit/CD117 protein
Specificity:	Human c-Kit/CD117
Localization:	Membrane and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN818-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN818-10ME**
Xmatrx®	**AY818-YCDE, AY818-50DE**
Concentrated:	**NU818-UCE, NU818-5UCE**
Recommended Positive Control:	**FG-818NE**
Recommended Barrier Control:	**FB-818NE**

CD117 is a proto-oncogene, meaning that overexpression or mutations of this protein can lead to cancer. Seminomas, a subtype of testicular germ cell tumors. Member of the Tyrosine Kinase Receptor (TKRs) and highly homologous to receptor PDF and CSF-1. Activation of c-Kit tyrosine kinase by SCF (Stem Cell factor) leads to autophosphorylation and association of c-Kit with substrate PI3K. CD117 is a marker for Mast cell and gastrointerstinal stroma tumor.

CDX-2



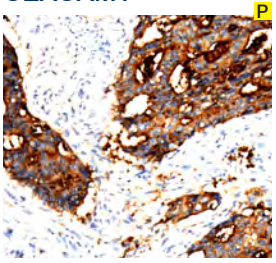
Tonsil stained with anti-Human CDX-2 using DAB chromogen

Clone:	EP25
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues near the C-term of human CDX-2 protein.
Specificity:	Human CDX-2
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK080-5K
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN777-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN777-10M**
Xmatrx®	**AY777-YCD, AY777-50D**
Concentrated:	**NU777-UC, NU777-5UC**
Recommended Positive Control:	**FG-777N**
Recommended Barrier Control:	**FB-777N**

CDX-2 antibody is a homeobox gene that encodes an intestine-specific transcription factor. The CDX-2 protein is expressed in primary and metastatic colorectal carcinomas, intestinal metaplasia of the stomach andintestinal type gastric cancer. In human colorectal cancer, the expression of both CDX-2 and carbonic anhydrase 1, a gene regulated by CDX-2, is reduced or absent. CDX-2 is one of the important regulators in defining pathways for coordinate control of drug metabolism in the gastrointestinal tract.

CEACAM1



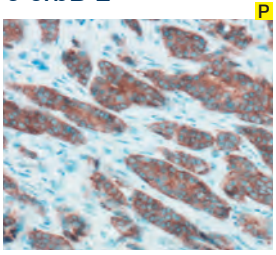
Colon cancer stained with Anti-CEACAM1 using DAB chromogen

Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	Recombinant fragment corresponding to a region within amino acids 1 and 232 of Human C-CAM1
Specificity:	Human CEACAM1
Localization:	Cell Membrane/ Cytoplasm
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR909-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR909-10RE**
Xmatrx®	**AW909-YCDE, AW909-50DE**
Concentrated:	**PU909-UPE, PU909-5UPE PU909-1UPE**
Recommended Positive Control:	**FG-909PE**
Recommended Barrier Control:	**FB-909PE**

CEACAM1 (Carcinoembryonic antigen-related cell adhesion molecule 1) also known as biliary glycoprotein and CD66a is a trans-membrane multifunctional cell adhesion molecule and a member of the immunoglobulin superfamily. CEACAM1 is broadly expressed in many epithelial, endothelial, and hematopoietic cells such as monocytes and natural killer cells and has been shown to play a role in multiple cellular activities including differentiation, angiogenesis, apoptosis, tumor suppression, metastasis, and the modulation of innate and adaptive immune responses. CEACAM1 is important to tumor development and altered CEACAM1 expression has been reported in many cancers including metastatic melanoma, osteosarcoma and lung cancer. Analyte Specific Reagent.

c-erbB-2



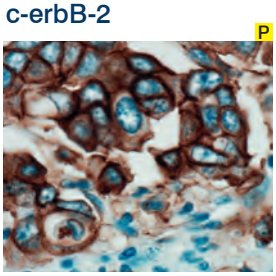
Breast cancer stained with anti-Human c-erbB-2 using DAB chromogen

Clone:	SP101
Isotype:	IgG
Source:	Rabbit
Immunogen:	A recombinant protein encoding extracellular domain of human c-erbB-2
Specificity:	Human c-erbB-2
Localization:	Membrane and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN752-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN752-10ME**
Xmatrx®	**AY752-YCDE, AY752-50DE**
Concentrated:	**NU752-UCE, NU752-5UCE**
Recommended Positive Control:	**FG-752NE**
Recommended Barrier Control:	**FB-752NE**

c-erbB-2 is a receptor tyrosine kinase of the c-erbB family. It is closely related in structure to the epidermal growth factor receptor. Amplification or over-expression of the erbB-2 gene occurs in approximately 15-30% of breast cancers. It is strongly associated with increased disease recurrence and a poor prognosis. Over-expression is also known to occur in ovarian, stomach, and aggressive forms of uterine cancer, such as uterine serous endometrial carcinoma. c-erbB-2 oncoprotein is detectable in a proportion of breast and other adenocarcinomas, as well as transitional cell carcinomas.

c-erbB-2



Breast cancer stained with anti-Human c-erbB-2 using DAB chromogen

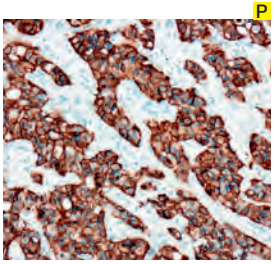
Clone:	SP3
Isotype:	IgG
Source:	Rabbit
Immunogen:	A recombinant protein encoding extracellular domain of human c-erbB-2
Specificity:	Human c-erbB-2
Localization:	Membrane and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN753-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN753-10ME**
Xmatrx®	**AY753-YCDE, AY753-50DE**
Concentrated:	**NU753-UCE, NU753-5UCE**
Recommended Positive Control:	**FG-753NE**
Recommended Barrier Control:	**FB-753NE**

c-erbB-2 is a receptor tyrosine kinase of the c-erbB family. It is closely related in structure to the epidermal growth factor receptor. Amplification or over-expression of the erbB-2 gene occurs in approximately 15-30% of breast cancers. It is strongly associated with increased disease recurrence and a poor prognosis. Over-expression is also known to occur in ovarian, stomach, and aggressive forms of uterine cancer, such as uterine serous endometrial carcinoma. c-erbB-2 oncoprotein is detectable in a proportion of breast and other adenocarcinomas, as well as transitional cell carcinomas.

c-erbB-2 (HER-2/neu)

P



Breast carcinoma stained with Anti-Her2 using DAB Chromogen

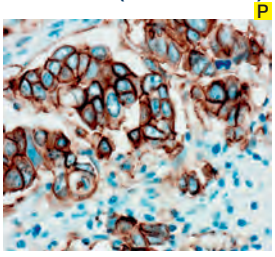
Clone:	CB11
Isotype:	IgG1
Source:	Mouse
Immunogen:	Synthetic peptide corresponding to a site on the internal domain of the c-erbB-2 Protein (HER-2/neu)
Localization:	Membrane and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM134-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM134-10ME**
Xmatrx®	**AX134-YCDE, AX134-50DE**
Concentrated:	**MU134-UCE, MU134-5UCE**
Recommended Positive Control:	**FG-134ME**
Recommended Barrier Control:	**FB-134ME**

The Her-2/neu (c-erb-B2) gene product is a 185 kD transmembrane glycoprotein associated with tyrosine kinase activity. The antibody CB11 is directed against the internal domain of this oncoprotein.

c-erbB-2 (HER-2/neu)

P



Breast stained with anti-Her2 using DAB chromogen

Clone:	EP3
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues surrounding tyrosine 877 of human HER2
Specificity:	Her2
Localization:	Membrane and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN726-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN726-10ME**
Xmatrx®	**AY726-YCDE, AY726-50DE**
Concentrated:	**NU726-UCE, NU726-5UCE**
Recommended Positive Control:	**FG-726NE**
Recommended Barrier Control:	**FB-726NE**

HER2 (human epidermal growth factor receptor 2), also known as Neu, ErbB-2, CD340 (cluster of differentiation 340) or p185, is a protein that in humans is encoded by the ERBB2 gene. HER2 is a member of the epidermal growth factor receptor (EGFR/ErbB) family.

c-erbB-3 (HER-3)

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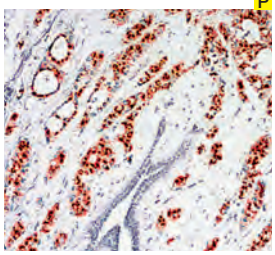

Breast carcinoma stained with Anti-c-erbB-3 using DAB chromogen

Clone:	RTJ1/A2
Isotype:	IgM
Source:	Mouse
Immunogen:	Synthetic peptide from the cytoplasmic domain of the human c-erbB-3 protein
Specificity:	c-erbB-3 protein
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM319-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM319-10M**
Xmatrx®	**AX319-YCD, AX319-50D**
Concentrated:	**MU319-UC, MU319-5UC**
Recommended Positive Control:	**FG-319M**
Recommended Barrier Control:	**FB-319M**

The c-erbB-3 gene product is a 180 kD transmembrane glycoprotein showing tyrosine kinase activity. It belongs to a family of growth receptors that show structural similarity to Epidermal Growth Factor Receptor (EGFR) and the c-erbB-2 proteins. The c-erbB-3 protein is widely expressed in digestive, urinary and respiratory tracts, the circulatory systems, female and male reproductive system but not in hematopoetic system. C-erbB-3 protein has also been seen to be overexpressed in some tumors including those of the breast, stomach, pancreas, colon, and ovary. This antibody stains c-erbB-3 protein in membrane of positive cells.

Chromogranin A

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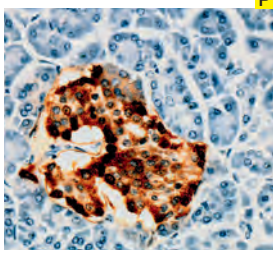

Pancreas tissue stained with Anti-Chromogranin using DAB chromogen

Clone:	LK2H10
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Tissue from human pheochromocytoma
Specificity:	Secretory storage granules in endocrine cells
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM126-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM126-10M**
Xmatrx®	**AX126-YCD, AX126-50D**
Concentrated:	**MU126-UC, MU126-5UC**
Recommended Positive Control:	**FG-126M**
Recommended Barrier Control:	**FB-126M**

This antibody recognizes Chromogranin A (68 kD) and other related chromogranin polypeptides from human, monkey, and pig. Chromogranin is widely distributed and through immunohistochemistry, chromogranin has been demonstrated in several elements of the diffuse neuroendocrine system, including anterior pituitary, thyroid parafollicular C cells, parathyroid chief cells, pancreatic islet cells, intestinal enteroendocrine cells, and tumors derived from these cells. The measurement of Chromogranin A has become a valuable tool in the investigation of neuroendocrine neoplasia. This antibody recognizes Chromogranin A (68 kD) and other chromogranin polypeptides in cytoplasm of positive cells.

Chromogranin A

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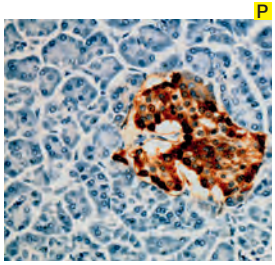

Pancreatic islet stained with Anti-Chromogranin A using DAB chromogen

Clone:	PHE-5
Isotype:	IgG
Source:	Mouse
Specificity:	Chromogranin A
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM356-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM356-10M**
Xmatrx®	**AX356-YCD, AX356-50D**
Concentrated:	**MU356-UC, MU356-5UC**
Recommended Positive Control:	**FG-356M**
Recommended Barrier Control:	**FB-356M**

This antibody recognizes Chromogranin A (68 kD) and other related chromogranin polypeptides from human, monkey, and pig. Through immunohistochemistry, chromogranin has been demonstrated in several elements of the diffuse neuroendocrine system, including anterior pituitary, thyroid parafollicular C cells, parathyroid chief cells, pancreatic islet cells, intestinal enteroendocrine cells, and tumors derived from these cells. Chromogranin immunoreactivity was also seen in thymus, spleen, lymph nodes, fetal liver, neurons, the inner segment of rods and cones, the submandibular gland, and the central nervous system.

c-Jun

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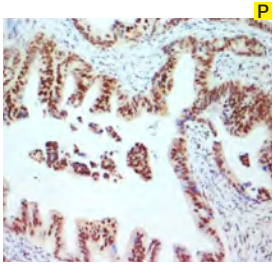

Stomach cancer stained with c-Jun

Clone:	4H9
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant fragment, human c-Jun expressed in E. Coli
Specificity:	c-Jun
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM958-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM958-10M**
Xmatrx®	**AX958-50D, AX958-YCD**
Concentrated:	**MU958-UC, MU958-5UC**
Recommended Positive Control:	**FG-958M**
Recommended Barrier Control:	**FB-958M**

c-Jun is a component of the transcription factor Activator Protein 1 (AP-1) that binds and activates transcription at TPA-responsive element (TRE/AP-1) elements and appears to be a major downstream target of the Stress-activated protein kinases/Jun amino-terminal kinases (SAPK/JNK) signaling pathway. The transcriptional activity of c-Jun is regulated by phosphorylation due to extracellular signals including growth factors, transforming oncoproteins, and UV irradiation that stimulates phosphorylation at Ser63/73 and activates c-Jun dependent transcription. c-Jun antibodies are used to study the signal-transducing transcription factor of the AP1 family. c-Jun has been implicated in several areas of cell biology including cell cycle progression through the G1 phase, transformation, and differentiation and has recently been linked to apoptosis. c-Jun is a known proto-oncogene and is found to be significantly overexpressed in lung and breast cancers, making it a viable tumor marker.

Claudin-5

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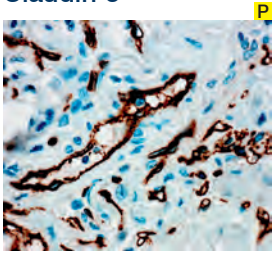

Lung squamous carcinoma stained with anti-Claudin 5 using DAB chromogen

Clone:	EP224
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human Claudin-5 protein
Specificity:	Claudin-5 protein
Localization:	Cell junction/Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN718-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN718-10M**
Xmatrx®	**AY718-YCD, AY718-50D**
Concentrated:	**NU718-UC, NU718-5UC**
Recommended Positive Control:	**FG-718N**
Recommended Barrier Control:	**FB-718N**

Claudin-5 is a member of the claudin family. Mutations in Claudin-5 have been found in patients with velocardiofacial syndrome. Claudin-5 labels endothelial cells. It has been used as a marker for endothelial lesions. Claudin-5 is also found in bronchial and lung epithelial cells. In tumors, Claudin-5 expression has been found in lung adenocarcinoma and squamous carcinoma. In serous ovarian adenocarcinoma, increased Claudin-5 expression is associated with aggressive behavior.

c-myc Protein

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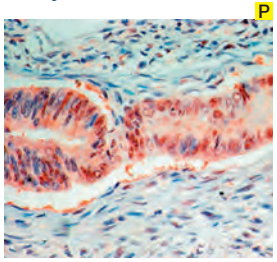


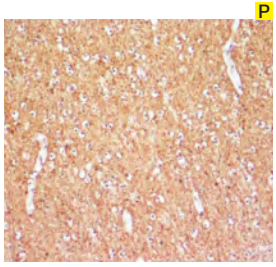
Breast carcinoma stained with Anti-BCA-225 using AEC chromogen

Clone:	9E10
Isotype:	IgG
Source:	Mouse
Immunogen:	Peptide AEEQKLISEEDL
Specificity:	c-myc Protein Antigen
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM318-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM318-10M**
Xmatrx®	**AX318-YCD, AX318-50D**
Concentrated:	**MU318-UC, MU318-5UC**
Recommended Positive Control:	**FG-318M**
Recommended Barrier Control:	**FB-318M**

Monoclonal antibody 9E10 reacts with the AEEQKLISEEDL epitope of c-myc protein. The c-myc gene product has been shown, through molecular studies, to be an essential protein for replication of cellular DNA and for the enhancement of mRNA transcription. The activated expression of one of the proto-oncogenes, c-myc, seems to accompany abnormalities in the progression of various malignancies such as lung, breast and colon carcinomas as well as melanomas. The antibody stains c-myc protein in nucleus of positive cells.

CNPase (Myelin)



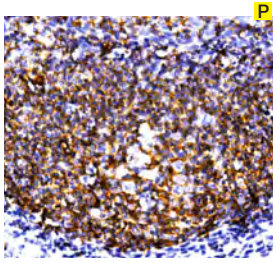
Brain stained with CNPase

Clone:	SMI 91
Isotype:	IgG1
Source:	Mouse
Immunogen:	Purified, human myelin CNPase
Specificity:	CNPase
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM959-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM959-10ME**
Xmatrx®	**AX959-50DE, AX959-YCDE**
Concentrated:	**MU959-UCE, MU959-5UCE**
Recommended Positive Control:	**FG-959ME**
Recommended Barrier Control:	**FB-959ME**

The high CNPase expression is seen in myelin-producing cells, including oligodendrocytes and Schwann cells. CNPase participate in RNA metabolism in the myelinating cell, CNP is the third most abundant protein in central nervous system myelin; accounts for roughly 4% of the total myelin protein in the central nervous system (CNS). CNPase binds to tubulin heterodimers and plays a role in tubulin polymerization and oligodendrocyte process outgrowth. The enzyme isolated from the mammalian brain is primarily a mixed dimer of approximately 94 kDa. The dimer consists of a varied proportion of CNP1 (46 kDa) and CNP2 (48 kDa) subunits in various species. Since the enzyme is a myelin-associated enzyme, it is of considerable interest in the study of diseases and disorders in which myelin is affected; such as multiple sclerosis, subacute sclerosing panencephalitis, acquired immunodeficiency with CNS involvement, and peripheral neuropathies.

CSF1R



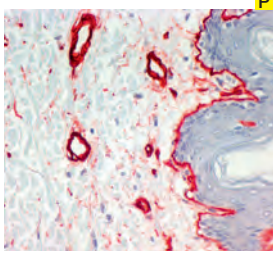
Tonsil stained with Anti-CSF-1R using DAB chromogen

Clone:	SP211
Isotype:	IgG
Source:	Rabbit
Immunogen:	Synthetic peptide from human CSF-1R protein
Specificity:	-
Localization:	Cell Membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN914-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN914-10ME**
Xmatrx®	**AY914-YCDE, AY914-50DE**
Concentrated:	**NU914-UCE, NU914-5UCE NU914-1UCE**
Recommended Positive Control:	**FG-914N**
Recommended Barrier Control:	**FB-914N**

CSF1R (Colony stimulating factor 1 receptor), also known as M-CSFR (macrophage colony-stimulating factor receptor) and CD115, is a receptor for CSF1 (colony stimulating factor 1), a cytokine which controls the production, differentiation, and function of macrophages. Activated CSF1R promotes the release of proinflammatory chemokines, and thereby plays an important role in innate immunity and in inflammatory processes which can further influence the development of tumors. Mutations in the CSF1R gene have been associated with a predisposition to myeloid malignancy and overexpression of CSF1R has been confirmed in various malignant tumors.Various CSF-1R inhibitors, mAbs (e.g. emactuzumab), and tyrosine kinase inhibitors are currently evaluated in early clinical trials.

Collagen IV



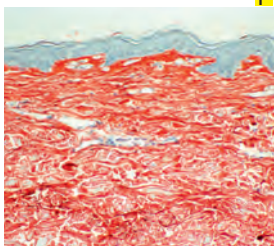
Skin stained with Anti-Collagen IV using AEC chromogen

Clone:	COL-94
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human Collagen IV
Specificity:	Type IV collagen
Localization:	Basal Laminae/ Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM379-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM379-10M**
Xmatrx®	**AX379-YCD, AX379-50D**
Concentrated:	**MU379-UC, MU379-5UC**
Recommended Positive Control:	**FG-379M**
Recommended Barrier Control:	**FB-379M**

This antibody reacts with Collagen IV and does not cross-react with other collagen types. It does not cross-react with human vitronectin, fibronectin or chondroitin sulfate A, B, or C. The positive or negative demonstration of basal lamina using immunostaining helps to distinguish some types of benign lesions from malignant tumors such as tubular carcinoma of the breast. Schwannomas and leiomyomas and their well differentiated malignant counterparts usually immunoreact in a characteristic fashion to the monoclonal antibody for type IV Collagen. The vascular nature of neoplasms such as hemangiopericytoma and epithelioid hemangio-endothelioma can be revealed by type IV collagen with more reliability than other non-specific stains. This monoclonal antibody stains human Collagen IV in basal laminae.

Collagen III



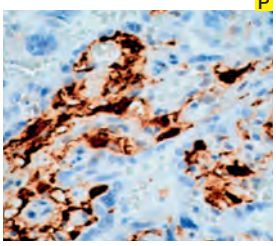
Skin tissue stained with Anti-collagen III using AEC chromogen

Clone:	HWD1.1
Isotype:	IgG
Source:	Mouse
Immunogen:	Human collagen purified by High Performance Liquid Chromatography
Specificity:	Collagen type III
Localization:	ECM
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM167-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM167-10M**
Xmatrx®	**AX167-YCD, AX167-50D**
Concentrated:	**MU167-UC, MU167-5UC**
Recommended Positive Control:	**FG-167M**
Recommended Barrier Control:	**FB-167M**

Collagen type III is a marker for interstitial connective tissue of the extracellular matrix. Collagen type III is diffusely present throughout the interstitial connective tissues making it a better marker than cellular fibronectin, which is more closely associated with basement membrane, and presence in extracellular matrix is minimal. In highly specialized vascular beds of spleen and glomeruli where basement membrane is prominent, little collagen type III is detected, whereas fibronectin is abundant. This antibody does not react with collagens type I, II, IV, V, VI, or VII. This antibody stains positive for Collagen type III in interstitial connective tissue but not on basement membranes.

Coagulation Factor XIIIa



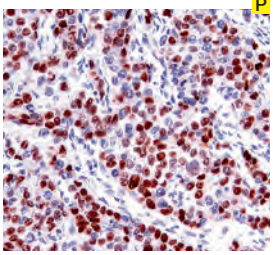
Placenta stained with anti-Human Coagulation Factor XIIIausing DAB chromogen

Clone:	SP196
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide near the N-terminus of human coagulation factor XIIIa protein
Specificity:	Human Coagulation Factor XIIIa
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN755-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN755-10M**
Xmatrx®	**AY755-YCD, AY755-50D**
Concentrated:	**NU755-UC, NU755-5UC**
Recommended Positive Control:	**FG-755N**
Recommended Barrier Control:	**FB-755N**

Coagulation Factor XIIIa, also known as fibrinoligase and fibrin-stabilizing factor, is the last enzyme in the blood coagulation cascade. It is a Ca2+-dependent transglutaminase in the stabilization of the fibrin clot. Factor XIIIa is expressed in some dendritic cells of placenta, skin, bladder, lung, and diseases with rich dendritic cells such as dermatofibroma, psoriasis, and Hodgkin's lymphoma.

Cyclin D1



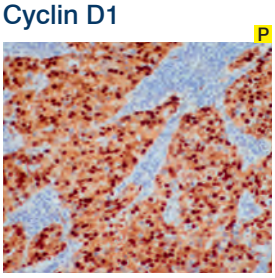
Breast cancer tissue stained with Anti-Cyclin D1 using AEC chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Synthetic peptide from C-terminus of Cyclin D1
Specificity:	Cyclin D1
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR447-10R**
Ready-to-Use (Automated):	
***i*6000™**	**AR447-10R**
Xmatrx®	**AW447-YCD, AW447-50D**
Concentrated:	**PU447-UP, PU447-5UP**
Recommended Positive Control:	**FG-447P**
Recommended Barrier Control:	**FB-447P**

Cyclins are a family of key regulatory proteins of the cell cycle. Cyclin D1 controls the transition from G1-phase to S-phase of the cell cycle. In addition to breast carcinoma, overexpression is also seen in mantle cell lymphoma, laryngeal epithelial lesions, bladder urothelial tumors, and gastric carcinoma.

Cyclin D1



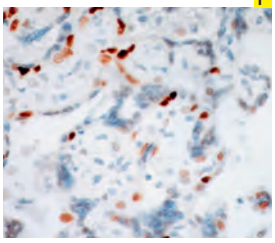
Breast cancer stained with anti-Human Cyclin D1 using DAB chromogen

Clone:	EP12
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues near the C-terminus of human Cyclin D1 protein.
Specificity:	Human Cyclin D1
Localization:	Nuclear/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN815-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN815-10M**
Xmatrx®	**AY815-YCD, AY815-50D**
Concentrated:	**NU815-UC, NU815-5UC**
Recommended Positive Control:	**FG-815N**
Recommended Barrier Control:	**FB-815N**

Cyclin D1 belongs to the Cyclin D family. Cyclin D1 is required for the cell cycle G1/S transition. Amplificaiton or overexpression of cyclin D1 plays a pivotal role in the development of various human cancers including breast cancer, colon cancer, melanoma, prostate cancer and lymphoma. It is useful to differentiate mantle cell lymphoma from small cleaved cell lymphoma. Rabbit monoclonal antibodies to cyclin D1 showed the highest sensitivity to detect this antigen in formalin fixed paraffin embedded tissue as compared to several other clones.

Cyclin E1



Planceta stained with anti-Human CyclinE1 using DAB chromogen

Clone:	EP126
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human CyclinE1 protein
Specificity:	Human CyclinE1
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN854-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN854-10M**
Xmatrx®	**AY854-YCD, AY854-50D**
Concentrated:	**NU854-UC, NU854-5UC**
Recommended Positive Control:	**FG-854N**
Recommended Barrier Control:	**FB-854N**

Cyclin E1 is a member of the cyclin E family that can associate with and activate cyclin-dependent kinase Cdk2. Expression of cyclin E1 is essential for the control of the cell cycle at the late G1 and early S phase. Ubiquination by the Cul-3 pathway and Fbw7 regulates cyclin E1 levels and is critically important in normal cells. In normal cells, cyclinE1 protein expression is tightly controlled through a combination of transcriptional and proteolytic regulatory processes. However, in many types of human tumors, cyclin E1 expression is frequently dysregulated, including overexpression, non-periodic expression relative to cell division, and generation of low molecular weight (LMW) derivatives. Several studies have consistently demonstrated that Cyclin E1 is associated with disease progression or patient survival in various malignancies including carcinomas of the breast, bladder, colon, and ovary. A recent study indicated that cyclin E amplification/ overexpression is responsible for trastuzumab resistance in HER2 positive breast cancer patients.

Cytokeratin 4

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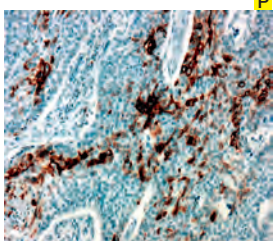


Esophagus stained with anti-CK4 using DAB chromogen

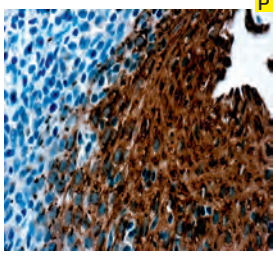
Clone:	EP4
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the C-terminus of human CK4 protein
Specificity:	CK4
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN717-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN717-10M**
Xmatrx®	**AY717-YCD, AY717-50D**
Concentrated:	**NU717-UC, NU717-5UC**
Recommended Positive Control:	**FG-717N**
Recommended Barrier Control:	**FB-717N**

Cytokeratin 4 (CK4) is a 59 kDa intermediate filament protein associated with cytokeratin 13. It is expressed in suprabasal cells of non-keratinized stratified squamous epithelium. A mutation in the CK4 gene causes white sponge nevus. A decreased expression of CK4 is associated with head and neck squamous carcinoma. It is helpful in differentiation of squamous cell carcinoma of esophagus origin from thyroid origin.

Cytokeratin 4

P



Cytokeratin 4 positivity in Tonsil stained using DAB Chromogen

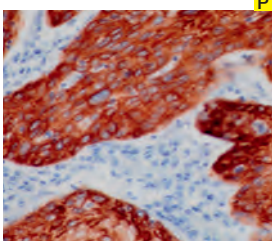
Clone:	6B10
Isotype:	IgG1
Source:	Mouse
Immunogen:	Cytokeratin 4
Specificity:	Cytokeratin 4
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM705-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM705-10ME**
Xmatrx®	**AX705-YCDE, AX705-50DE**
Concentrated:	**MU705-UCE, MU705-5UCE**
Recommended Positive Control:	**FG-705ME**
Recommended Barrier Control:	**FB-705ME**

Cytokeratin 4 is a 59 kD cytokeratin intermediate fillament protein. It is found in non-complying squamous epithelium such as that of the superficial and intermediate epithelial cells of the esophagus, ectocervix, tongue, vagina, larynx, pharynx, epiglotis and anus, as well as the superficial cells of the cornea. Cytokeratin 4 is also expressed in the superbasal cells of urinary bladder, transitional epithelium in single cells and cell groups of sweat glands, prostatic ducts and in cylindrical, cilliated bronchial epithelial cells.

Cytokeratin 5

P



Cervical cancer stained with anti-Human Cytokeratin 5using DAB chromogen

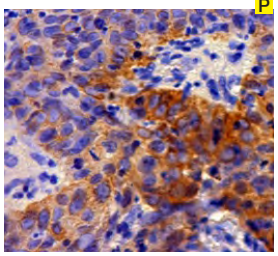
Clone:	EP42
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the C-terminus of human Cytokeratin 5 protein
Specificity:	Human Cytokeratin 5
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN853-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN853-10M**
Xmatrx®	**AY853-YCD, AY853-50D**
Concentrated:	**NU853-UC, NU853-5UC**
Recommended Positive Control:	**FG-853N**
Recommended Barrier Control:	**FB-853N**

The mitotically active basal layers of most stratified squamous epithelia express 10% to 30% of their total protein as keratin. The two keratins specifically expressed in these cells are the type II keratin CK5 and its corresponding partner, type I keratin CK14, both of which are essential for the formation of 8-nm filaments. CK5 and calretinin have been useful in different studies as immunohistochemical markers suggestive of mesothelioma, and their expression is analyzed for the histological differential diagnosis with adenocarcinomas, especially when confronting with metastatic tumors of unknown origin. CK5 labels myoepithelial cells of breast and prostate basal cells. A cocktail of CK5, CK14 and p63, has been used as sensitive and specific basal cell marker of basal-like phenotype of breast carcinoma and to differentiate normal and prostate cancer. Loss-of-function mutations in the keratin 5 gene (KRT5) affected family members and in six unrelated patients with Dowling-Degos disease (DDD), an autosomal dominant genodermatosis.

Cytokeratin 5 & 6

P



Cervical cancer stained with Anti-Cytokeratin 5&6 using DAB chromogen

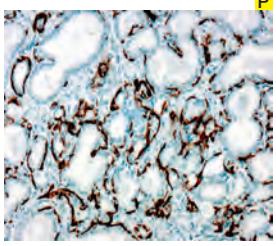
Clone:	EP24 & EP67
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the N terminus of human Cytokeratin 5&6
Specificity:	Human Cytokeratins 5 & 6
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN892-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN892-10M**
Xmatrx®	**AY892-YCD,AY892-50D**
Concentrated:	**NIL**
Recommended Positive Control:	**FG-892N**
Recommended Barrier Control:	**FB-892N**

Cytokeratins are intermediate filament proteins expressed in cytoplasm of epithelial cells. The mitotically active basal layers of most stratified squamous epithelia express 10% to 30% of their total protein as keratin. The two keratins specifically type II keratin CK5 and type II CK6, which essentially form 8-nm filaments. CK5 is a useful immunohistochemical marker in different studies of mesothelioma, and the expression is key tool for the histological differential diagnosis with adenocarcinomas, especially when confronting with metastatic tumors of unknown origin. CK5 labels myoepithelial cells of breast and prostate basal cells.

Cytokeratin 5 + Cytokeratin 14

P



Prostate stained with anti-CK5&14 using DAB chromogen

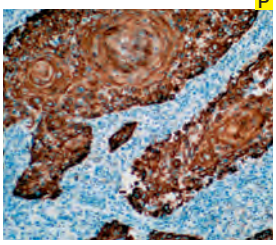
Clone:	EP24 + EP61
Isotype:	IgG
Source:	Rabbit
Immunogen:	CK5: Synthetic peptide corresponding to residues near the C-terminus of human CK-5 protein CK14: A synthetic peptide corresponding to esidues near the C-terminus of human CK14 protein
Specificity:	Cytokeratin 5 & 14
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN730-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN730-10ME**
Xmatrx®	**AY730-YCDE, AY730-50DE**
Concentrated:	**NU730-UCE, NU730-5UCE**
Recommended Positive Control:	**FG-730NE**
Recommended Barrier Control:	**FB-730NE**

CK5 labels myoepithelial cells of breast and prostate basal cells. CK5 and calretinin have been useful in mesothelioma and differentiation of adenocarcinomas, especially when facing metastatic tumors of unknown origin. Cytokeratin 14 (CK14) is a 50-kDa keratin expressed in abundance in stratified epithelial, epidermal, basal, mesothelial, and myoepithelial cells in various tissues including breast and prostate. Cytokeratin 5/14-positive breast cancers are true basal phenotype confined to BRCA1 tumors. Along with p63 and CK5, the CK14 antibody has been a useful marker for cells with basal, squamous and myoepithelial differentiation.

Cytokeratin 5

P



Cervical cancer stained with anti-Human CK-5 using DAB chromogen

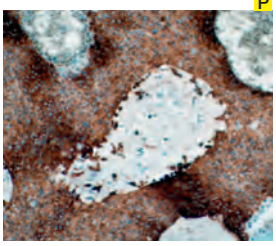
Clone:	EP24
Isotype:	IgG
Source:	Rabbit
Immunogen:	Residues near the C-term of human CK-5 protein.
Specificity:	Human CK-5
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN847-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN847-10M**
Xmatrx®	**AY847-YCD, AY847-50D**
Concentrated:	**NU847-UC, NU847-5UC**
Recommended Positive Control:	**FG-847N**
Recommended Barrier Control:	**FB-847N**

The mitotically active basal layers of most stratified squamous epithelia express 10% to 30% of their total protein as keratin. The two keratins specifically expressed in these cells are the type II keratin CK5 and its corresponding partner, type I keratin CK14, both of which are essential for the formation of 8-nm filaments. CK5 and calretinin have been useful in different studies as immunohistochemical markers suggestive of mesothelioma, and their expression is analyzed for the histological differential diagnosis with adenocarcinomas, especially when confronting with metastatic tumors of unknown origin. CK5 labels myoepithelial cells of breast and prostate basal cells. A cocktail of CK5, CK14 and p63, has been used as sensitive and specific basal cell marker of basal-like phenotype of breast carcinoma and to differentiate normal and prostate cancer. Loss-of-function mutations in the keratin 5 gene (KRT5) affected family members and in six unrelated patients with Dowling-Degos disease (DDD), an autosomal dominant genodermatosis.

Cytokeratin 6

P



Cervical cancer tissue stained with anti-Human Cytokeratin 6 using DAB chromogen

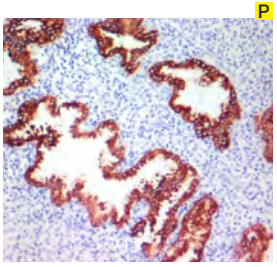
Clone:	EP67
Isotype:	IgG
Source:	Rabbit
Immunogen:	Residues of human Cytokeratin 6 protein
Specificity:	Human Cytokeratin 6
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN845-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN845-10M**
Xmatrx®	**AY845-YCD, AY845-50D**
Concentrated:	**NU845-UC, NU845-5UC**
Recommended Positive Control:	**FG-845N**
Recommended Barrier Control:	**FB-845N**

The human type II Cytokeratin 6 (CK6; 56 kDa) is well known for its strong induction in stratified epithelia that feature an enhanced cell proliferation rate or abnormal differentiation during wound healing, in several diseases (e.g. psoriasis, actinic keratosis) and in cancer. CK6 is expressed on stratified epithelia including oral mucosa, esophagus, basal layer of epidermis, the outer root sheath of hair follicles, and in glandular epithelia. CK6 is a marker of hyperproliferative and activated keratinocytes found in psoriasis. CK6 paired with CK5 is useful to differentiate mesothelioma (positive) from lung carcinoma (negative) or metastatic carcinoma (negative) in the pleura. CK5/6 has also been used to distinguish usual ductal hyperplasia of the breast (strong staining) from solid papillary DCIS (negative).

Cytokeratin 7

P



Endometrium stained with Cytokeratin-7

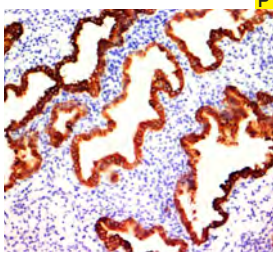
Clone:	KRT7/760
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant full-length human KRT7 protein
Specificity:	CK7
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM944-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM944-10M**
Xmatrx®	**AX944-50D, AX944-YCD**
Concentrated:	**MU944-UC, MU944-5UC**
Recommended Positive Control:	**FG-944M**
Recommended Barrier Control:	**FB-944M**

Anti-Cytokeratin 7 (CK7) antibody recognizes an intermediate filament protein (IFP) of 55 kDa. This monoclonal antibody (mAb) is highly specific to cytokeratin 7 and shows no cross-reaction with other IFPs. Cytokeratin 7 is a basic cytokeratin and belongs to type II cytokeratin. Type II cytokeratin is specifically expressed in the simple epithelia lining the cavities of the internal organs and in the gland ducts and blood vessels and is found in most glandular and transitional epithelia; but not in the stratified squamous epithelia. Cytokeratin 7 is expressed in the epithelial cells of the ovary, lung, and breast but not of the colon, prostate, or gastrointestinal tract. Anti-Cytokeratin 7 mAb is highly useful in distinguishing ovarian carcinomas (CK 7+) from colon carcinomas (CK 7-).

Cytokeratin 7

P



Endometrium stained with Anti-Cytokeratin7 using DAB chromogen

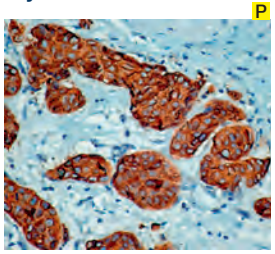
Clone:	OV-TL12/30
Isotype:	IgG1Kappa
Source:	Mouse
Immunogen:	Ovarian carcinoma cells
Specificity:	Cytokeratin 7
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM255-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM255-10M**
Xmatrx®	**AX255-YCD, AX255-50D**
Concentrated:	**MU255-UC, MU255-5UC**
Recommended Positive Control:	**FG-255M**
Recommended Barrier Control:	**FB-255M**

Cytokeratin 7 is a 54 kD marker of simple epithelium. Antibody to Cytokeratin 7 strongly stains all cell layers of the urinary bladder transitional epithelium. However, Cytokeratin 7 is absent from gastrointestinal epithelium, hepatocytes, proximal and distal tubules of the kidney, and myoepithelium, and also cannot be detected in the stratified epithelia of the skin, tongue, esophagus, or cervix. Cytokeratin 7 recognizes specific subtypes of adenocarcinomas and can be used to differentiate between Cytokeratin 7-positive tissues such as ovarian carcinomas and transitional cell carcinomas and Cytokeratin 7-negative tissues such as carcinomas of the gastrointestinal tract and prostate cancers.

Cytokeratin 7 & 8

P



Breast carcinoma stained with Anti-Cytokeratin 7&8 using DAB chromogen

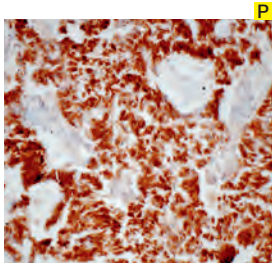
Clone:	OV-TL12/30 & C51
Isotype:	IgG1
Source:	Mouse
Immunogen:	Ovarian carcinoma cells & MCF-7 cells
Specificity:	Cytokeratin 7 & 8
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM587-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM587-10M**
Xmatrx®	**AX587-YCD, AX587-50D**
Concentrated:	**MU587-UC, MU587-5UC**
Recommended Positive Control:	**FG-587M**
Recommended Barrier Control:	**FB-587M**

Cytokeratins 7 and 8 are two closely related type II cytokeratins characteristic of simple epithelia. Cytokeratin 7 is less widespread than cytokeratin 8 and is expressed in sebaceous and sweat glands and some cells of the inner hair root sheath. Cytokeratin 8 is primarily found in the non squamous epithelia. Cytokeratin 7 is usually present in adenocarcinomas of lung, breast, endometrioid tumors, transitional cell carcinoma of the bladder. The combination of cytokeratin 7 and 8 is a useful marker for differentiating adenocarcinomas and ductal carcinomas from squamous cell carcinomas.

Cytokeratin 8

P



Breast Carcinoma stained with Anti-Cytokeratin8 using DAB chromogen

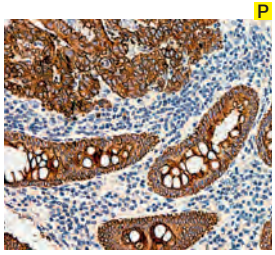
Clone:	C51
Isotype:	IgG1
Source:	Mouse
Immunogen:	A cytoskeletal preparation of MCF-7 cells
Specificity:	Cytokeratin 8
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM142-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM142-10M**
Xmatrx®	**AX142-YCD, AX142-50D**
Concentrated:	**MU142-UC, MU142-5UC**
Recommended Positive Control:	**FG-142M**
Recommended Barrier Control:	**FB-142M**

Cytokeratin 8 (52 kD) and 18 (45 kD) comprise a Cytokeratin pair as markers for simple epithelia. In most situations, Cytokeratin 8 exists in tissues together with Cytokeratin 18, but there are exceptions among some normal and abnormal epithelial cells. Therefore, it is useful to use both Cytokeratin 8 and Cytokeratin 18 in combination with other anti Cytokeratin antibody monoclonals when studying cytokeratin expression patterns. Clone C-51 is designed for the specific localization of Cytokeratin 8 and does not cross-react with human cytokeratin numbers 7, 17, 18, or 19. This antibody stains Cytokeratin 8 in cytoplasm of positive epithelial cells.

Cytokeratins 8 & 18

P



Colon carcinoma stained with Anti-Cytokeratin 8 &18 using DAB chromogen

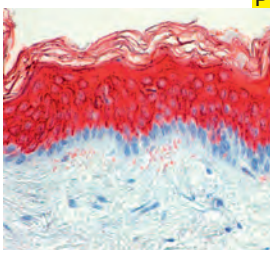
Clone:	5D3
Isotype:	IgG1
Source:	Mouse
Immunogen:	Cytokeratins from human breast carcinoma cell line MCF-7
Specificity:	Cytokeratins 8 and 18
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM131-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM131-10M**
Xmatrx®	**AX131-YCD, AX131-50D**
Concentrated:	**MU131-UC, MU131-5UC**
Recommended Positive Control:	**FG-131M**
Recommended Barrier Control:	**FB-131M**

Carcinomas may be classified precisely by the analysis of their keratin patterns. Clone 5D3 recognizes an epitope restricted to a few members of the cytokeratin subclasses, specifically Cytokeratins 8 and 18. This antibody reacts with all simple epithelia including glandular epithelium and ciliated pseudostratified columnar epithelium localized in thyroid, female breast, gastrointestinal and respiratory tract. 5D3 may be a useful marker for demonstrating columnar cell differentiation when studying biphasic differentiation of basal cells of respiratory or intermediate epithelium.

Cytokeratin 10

P



Skin stained with Anti-Cytokeratin 10 using DAB chromogen

Clone:	DEK-10
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human epidermal keratin isolated by high salt extraction
Specificity:	Cytokeratin 10
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM201-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM201-10M**
Xmatrx®	**AX201-YCD, AX201-50D**
Concentrated:	**MU201-UC, MU201-5UC**
Recommended Positive Control:	**FG-201M**
Recommended Barrier Control:	**FB-201M**

Cytokeratins 1 and 10 are expressed only in suprabasal layers, and their expression increases with epidermal maturation. In terminally differentiated keratinocytes of the stratum corneum, Cytokeratins 1 and 10 are regarded as markers for orthokeratinization. Keratinizing areas expressing Cytokeratin 10 have been demonstrated in various well differentiated squamous cell carcinomas derived from epidermis as well as from various internal sites of stratified epithelia. This antibody stains cytoplasm in epithelial cells of the stratum corneum.

Cytokeratin 13

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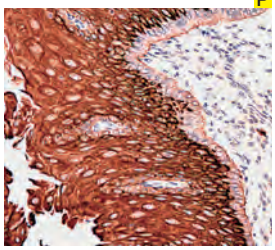

Suprabasal cells in esophagus stained with Anti-Cytokeratin 13 using DAB chromogen

Clone:	AE8
Isotype:	IgG
Source:	Mouse
Immunogen:	Human epidermal keratin
Specificity:	Cytokeratin 13
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM132-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM132-10M**
Xmatrx®	**AX132-YCD, AX132-50D**
Recommended Positive Control:	**FG-132M**
Recommended Barrier Control:	**FB-132M**

Cytokeratins 4/13 are markers for stratified squamous epithelia in internal organs including esophagus and tongue. This antibody is a reliable marker for squamous metaplasia found in respiratory tissue and prostate gland. Squamous metaplasia in the respiratory tract and in some other human organs may be associated with a precancerous condition. This 51 kD Cytokeratin 13, which is expressed in internal non-keratinized stratified squamous epithelia, and its frequently co-expressed partner, the basic 59 kD Cytokeratin 4, may be regarded as markers for esophageal-type differentiation. This antibody stains most cytoplasm in stratified squamous epithelium (except skin epidermis).

Cytokeratin 14

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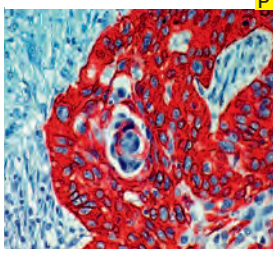

Squamous cell carcinoma tissue stained with Anti-Cytokeratin 14 using AEC chromogen

Clone:	LL002
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Thyroglobulin conjugated synthetic peptide representing the C-terminal (last 15 residues) of human cytokeratin 14
Specificity:	Cytokeratin 14
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM146-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM146-10M**
Xmatrx®	**AX146-YCD, AX146-50D**
Concentrated:	**MU146-UC, MU146-5UC**
Recommended Posiitve Control:	**FG-146M**
Recommended Barrier Control:	**FB-146M**

Cytokeratin 14 (molecular weight 50 kD), an acidic (Type I) cytokeratin protein, is one of the cytokeratin pairs (50/ 58 kD) that distinguishes stratified epithelial cell types from simple epithelial types. Cytokeratin 14 is homogeneously expressed in all cells of the keratinizing squamous epithelium and is confined to the basal and parabasal cells in the nonkeratinizing squamous epithelium of the normal adult urinary tract. The monoclonal antibody to Cytokeratin 14 may be helpful in distinguishing the cell types of the human mammary gland, thus it may also be used to study histogenesis of breast carcinoma. This antibody stains Cytokeratin 14 in cytoplasm of epithelial cells.

Cytokeratin 14

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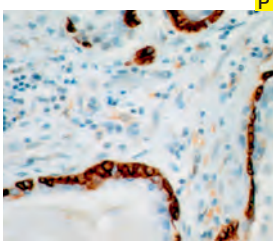


Prostate tissue stained with anti-Human Cytokeratin 14 using DAB chromogen

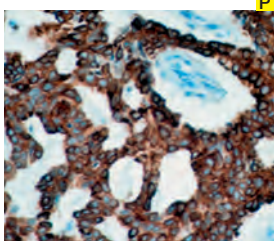
Clone:	EP61
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues near the C-terminus of human Cytokeratin 14 protein.
Specificity:	Human Cytokeratin 14
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN831-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN831-10M**
Xmatrx®	**AY831-YCD, AY831-50D**
Concentrated:	**NU831-UC, NU831-5UC**
Recommended Positive Control:	**FG-831N**
Recommended Barrier Control:	**FB-831N**

Keratins are cytoplasmic intermediate filament proteins expressed by epithelial cells. The mitotically active basal layers of most stratified squamous epithelia express 10% to 30% of their total protein as keratin. Cytokeratin 14 (CK14) is a 50-kDa keratin expressed in abundance in stratified epithelial cells, epidermal cells, basal cells, mesothelial cells, and myoepithelial cells in various tissues including breast and prostate. CK14 is helpful in the identification of breast cancer with basal phenotype.

Cytokeratin 15

P



Squamous cancer tissue stained with anti-Human Cytokeratin 15 using DAB chromogen

Clone:	EP14
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human Cytokeratin 15 protein
Specificity:	Human Cytokeratin 15
Localization:	-
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN855-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN855-10M**
Xmatrx®	**AY855-YCD, AY855-50D**
Concentrated:	**NU855-UC, NU855-5UC**
Recommended Positive Control:	**FG-855N**
Recommended Barrier Control:	**FB-855N**

Cytokeratin 15 (CK15) is involved in the development of stratified epithelia from one-layered polar epithelia and continues to be expressed in several adult epithelial tissues. It labels the basal keratinocytes of stratified tissues, including the fetal epidermis and fetal nail. Although CK15 in normal hair follicles was virtually absent from hair bulbs, it was expressed by a subset of keratinocytes in the outer root sheath. In human conjunctival epithelium, strong expression of CK15 was observed in basal cells, whereas Cytokeratin 19 was expressed in both basal and suprabasal layers. CK15 may be used to differentiate primary from metastatic skin cancer. It may be a useful stem cell marker for hair follicle and breast epithelium.

Cytokeratin 16

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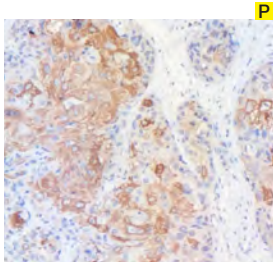


Tonsil stained with CD8a

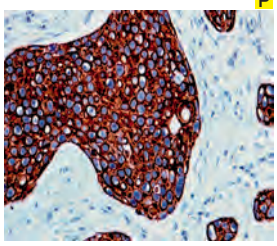
Clone:	KRT16/2043R
Isotype:	IgG
Source:	Rabbit
Immunogen:	Peptide from the C-terminal of human Cytokeratin 16
Specificity:	KRT16
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN933-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN933-10M**
Xmatrx®	**AY933-50D, AY933-YCD**
Concentrated:	**NU933-UC, NU933-5UC**
Recommended Positive Control:	**FG-933N**
Recommended Barrier Control:	**FB-933N**

Cytokeratin 16 protein is a member of the keratin (type I) family. The keratins are intermediate filament proteins responsible for the structural integrity of epithelial cells and are subdivided into cytokeratins and hair keratins. Epidermis-specific type I keratin that plays a key role in skin; acts as a regulator of innate immunity in response to skin barrier breach; required for some inflammatory checkpoint for the skin barrier maintenance. This keratin has been coexpressed with keratin 14 in a number of epithelial tissues; including esophagus; tongue and hair follicles. Cytokeratin 16 is expressed in benign stratified squamous epithelium and squamous cell carcinoma of the head and neck; as well as luminal cells of mammary gland and sweat ducts. It is absent in non-invasive breast carcinomas and normal breast tissue.

Cytokeratin 17

P



Squamous Cell carcinoma stained with Anti-CK17 using DAB chromogen

Clone:	E27
Isotype:	IgG
Source:	Mouse
Immunogen:	Recombinant human cytokeratin 17
Specificity:	Cytokeratin 17
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM572-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM572-10M**
Xmatrx®	**AX572-YCD, AX572-50D**
Concentrated:	**MU572-UC, MU572-5UC**
Recommended Positive Control:	**FG-572M**
Recommended Barrier Control:	**FB-572M**

Cytokeratin 17 is 46 kD intermediate filament found in simple epithelia sometimes in association with Cytokeratin 7. This antibody has been used to distinguish cervical immature squamous metaplasia from high grade cervical intraepithelial neoplasia (CIN III). Anti-CK17 also labels myoepithelial cells in the benign breast tissue. CK17 labelling of breast carcinoma cells (so-called basal phenotype) has been associated with a poor prognosis.

Cytokeratin 18

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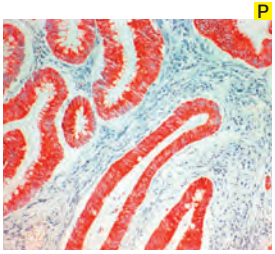

Adenocarcinoma stained with Anti-CK18 using AEC chromogen

Clone:	DC-10
Isotype:	IgG1
Source:	Mouse
Immunogen:	A cytoskeletal preparation of HeLa cells
Specificity:	Cytokeratin 18
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use(Manual):	**AM143-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM143-10M**
Xmatrx®	**AX143-YCD, AX143-50D**
Concentrated:	**MU143-UC, MU143-5UC**
Recommended Positive Control:	**FG-143M**
Recommended Barrier Control:	**FB-143M**

Cytokeratins 8 (52 kD) and 18 (45 kD) comprise a cytokeratin pair as markers for simple epithelia. The monoclonal antibodies specific for cytokeratin 18 stain all carcinomas derived from simple epithelia but do not stain well-differentiated squamous cell carcinoma. It is useful to use monoclonal antibodies to Cytokeratins 8 and 18 in combination with other anti-cytokeratin monoclonal antibodies when studying cytokeratin expression patterns. This antibody stains Cytokeratin 18 in cytoplasm of epithelial cells.

Cytokeratin 19

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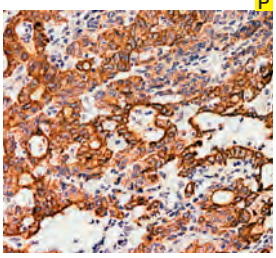

Colon carcinoma stained with Anti-Cytokeratin 19 using DAB chromogen

Clone:	RCK108
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Total cell extract from human bladder cancer cell line
Specificity:	Cytokeratin 19
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM246-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM246-10M**
Xmatrx®	**AX246-YCD, AX246-50D**
Concentrated:	**MU246-UC, MU246-5UC**
Recommended Positive Control:	**FG-246M**
Recommended Barrier Control:	**FB-246M**

Cytokeratin 19 (molecular mass 40 kD) is a marker of simple epithelia. Cytokeratin 19 has been found in mesothelial and mesothelioma cells, ovarian cysts, cystadenomas, and ovarian carcinomas, in adenocarcinomas of the lung and in tumor cells of pulmonary metastases, in the ductal cells of normal pancreas and in pancreatic cancers. It has been shown to be present in the basal layer of non-keratinizing stratified squamous epithelia such as the oral cavity and the ectocervix.

Cytokeratin 20

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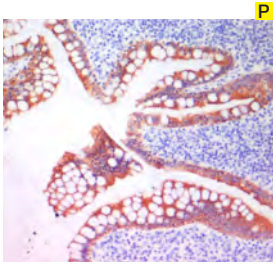

Appendix stained with Cytokeratin-20

Clone:	KRT20/1992
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Recombinant human KRT20 protein fragment
Specificity:	CK20
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM946-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM946-10M**
Xmatrx®	**AX946-50D, AX946-YCD**
Concentrated:	**MU946-UC, MU946-5UC**
Recommended Positive Control:	**FG-946M**
Recommended Barrier Control:	**FB-946M**

This monoclonal antibody recognizes an intermediate filament protein of 46 kDa, identified as cytokeratin 20 (KRT20, CK20). CK20 is abundantly expressed in goblet cells and enterocytes of the gastrointestinal tract. It plays a significant role in maintaining keratin filament organization in intestinal epithelia. It is a useful marker of pancreatic and colorectal cancer and has been detected in adenocarcinomas of the colon, stomach, and biliary tract. Diseases associated with CK20 include Merkel cell carcinoma and glandular cystitis. Breast carcinomas are generally non-reactive.

Cytokeratin 20

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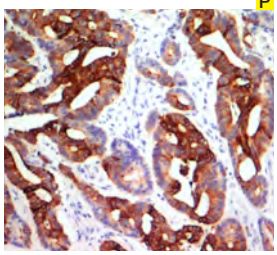

Cytokeratin 20 positivity in colon carcinoma stained using DAB chromogen

Clone:	IT-Ks20.8
Isotype:	IgG 2a
Source:	Mouse
Immunogen:	Elecrophoretically purified cytokeratin 20 from human intestinal mucosa
Specificity:	Cytokeratin 20
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM315-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM315-10M**
Xmatrx®	**AX315-YCD, AX315-50D**
Concentrated:	**MU315-UC, MU315-5UC**
Recommended Positive Control:	**FG-315M**
Recommended Barrier Control:	**FB-315M**

Cytokeratin 20 (46kD) is relatively less acidic than other type I keratins. This antibody reacts with certain types of carcinomas such as adeno carcinomas of the colon, transitional cell carcinomas of the bladder and Merkel cell tumors of the skin. It does not stain breast, lung and endometrial adenocarcinomas. The differential staining pattern of this antibody makes it very useful for tumor evaluation when used in conjunction with cytokeratin 7 staining.

Cytokeratin 20

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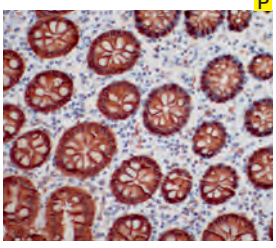

Colon cancer stained with anti-Human Cytokeratin 20 using DAB chromogen

Clone:	EP23
Isotype:	IgG
Source:	Rabbit
Immunogen:	Residues near the C-term of human Cytokeratin 20 protein.
Specificity:	Human Cytokeratin 20
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK /HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN849-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN849-10M**
Xmatrx®	**AY849-YCD, AY849-50D**
Concentrated:	**NU849-UC, NU849-5UC**
Recommended Positive Control:	**FG-849N**
Recommended Barrier Control:	**FB-849N**

Intermediate-sized filament (IF) protein designated cytokeratin 20 (CK20) is a major cellular protein of mature enterocytes and goblet cells commonly found in mucosal epithelium of the mammalian gastrointestinal tract. Results strongly suggest that transcriptional regulation of keratin genes in the intestinal epithelium occurs at the level of both immature and terminally differentiated epithelial cells, and is tightly regulated during both fetal development and crypt-to-villus differentiation of the intestinal epithelium. CK20 has recently been reported to be useful to distinguish between primary and metastatic lung adenocarcinoma. CK20 expression was significantly more prevalent in adenocarcinoma that originated in the GI tract than that of pulmonary or breast origin.

Cytokeratin Cocktail

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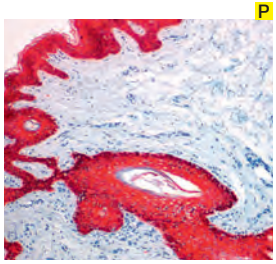

Skin tissue stained with Cytokeratin cocktail AE1 & AE3 using AEC chromogen

Clone:	AE1 and AE3
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human epidermal keratin
Specificity:	Cytokeratin
Localization:	Cytoplasm
Pre-treatment:	Trypsin, 37°C, 20 min/ EZ-AR 1
Manual/i6000™:	EK001-5K
Xmatrx®:	HX031-YCD

Ready-to-Use (Manual):	**AM071-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM071-10M**
Xmatrx®	**AX071-YCD, AX071-50D**
Concentrated:	**MU071-UC, MU071-5UC**
Recommended Positive Control:	**FG-071M**
Recommended Barrier Control:	**FB-071M**

Human cytokeratins (40 kD to 68 kD) are a family of water-insoluble proteins that form a major part of the cytoskeleton of epithelial cells. Immunohistochemical analysis of a large variety of neoplasms has established keratin protein immunohistochemistry as an important aid for classification of epithelial neoplasms. Monoclonal antibodies AE1 and AE3 recognize the acidic and basic subfamilies of cytokeratin, respectively. Thus, the combination of these two antibodies can be used to detect almost all human epithelia. These antibodies show no cross-reactivities with other cytoskeletal proteins. This monoclonal antibody cocktail can be used to detect almost all human epithelia. Membrane and cytoplasmic staining is seen in epithelial cells.

Cytokeratin Cocktail, Broad Spectrum

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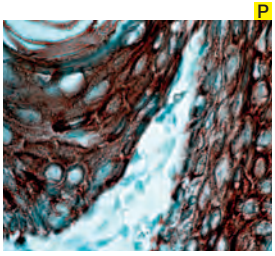

Normal stomach mucosa showing cytoplasmic positivity for Cytokeratin cocktail using DAB chromogen

Clone:	34βE12/C51/AE1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human epidermal keratin and cytoskeletal preparation of MCF-7 cells
Specificity:	Cytokeratin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx®:	HX032-YCD

Ready-to-Use (Manual):	**AM273-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM273-10M**
Xmatrx®	**AX273-YCD, AX273-50D**
Recommended Positive Control:	**FG-273M**
Recommended Barrier Control:	**FB-273M**

Human cytokeratins, which form a major part of the cytoskeleton of epithelial cells, belong to a family of water soluble proteins ranging in size from 40 to 68 kD. Various subsets of cytokeratin proteins occur in any given epithelium, depending on the epithelium cell type, stage of differentiation and embryonic development, cellular growth environment, and type of malignancy. Immunohistochemical analysis of a large variety of neoplasms has established that cytokeratin protein immunohistochemistry is an important aid for epithelial tumor classification. This monoclonal antibody stains keratin in the cytoplasm of positive epithelial cells.

Cytokeratin Cocktail, Broad Spectrum

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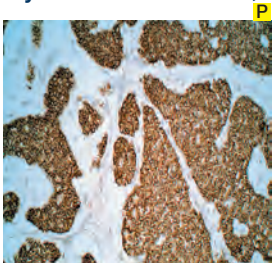

Breast Carcinoma stained with Anti-CK88 using DAB chromogen

Clone:	LL002+DEK-10+RCK108+OV-TL12/30+C11
Isotype:	IgG Cocktail
Source:	Mouse
Immunogen:	Human epidermal keratin
Specificity:	Cytokeratin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM372-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM372-10M**
Xmatrx®	**AX372-YCD, AX372-50D**
Concentrated:	**MU372-UC, MU372-5UC**
Recommended Positive Control:	**FG-372M**
Recommended Barrier Control:	**FB-372M**

Human cytokeratins, a family of water-insoluble polypeptides, form the major part of the cytoskeleton in all normal and neoplastic epithelial cells. CK88 is a broad spectrum antibody cocktail that reacts with a variety of normal and neoplastic epithelia. It recognizes most epithelium including simple, basal, suprabasal layers, cornea, cornifying stratified epithelium of skin, transitional epithelium of urinary tract, and squamous epithelium. Analysis of intracellular keratin by immunoperoxidase technique is helpful in establishing the epithelial nature of primary or metastatic poorly differentiated neoplasms. This antibody stains cytokeratin in cytoplasm of normal and neoplastic epithelial cells.

Cytokeratin, High MW

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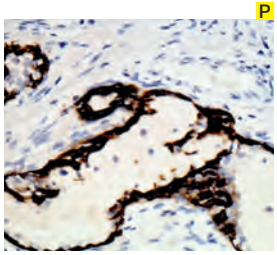

Prostatic basal cells stained with Anti-Cytokeratin (HMW) using DAB chromogen

Clone:	34βE12
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Human stratum corneum
Specificity:	High molecular weight cytokeratin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM291-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM291-10M**
Xmatrx®	**AX291-YCD, AX291-50D**
Recommended Positive Control:	**FG-291M**
Recommended Barrier Control:	**FB-291M**

Monoclonal antibody 34βE12 is specific for "high molecular weight" cytokeratins 1, 5, 10, 14, corresponding to molecular weights of 68, 58, 56.5, and 50 kD, respectively, which are characteristically found in complex epithelium. The antibody reacts with all squamous and ductal epithelium and stains carcinomas. It reacts with benign small-acinar lesions of the prostate. This antibody stains positive in cytoplasm of epithelial cells.

Cytokeratin, High MW (Basic)

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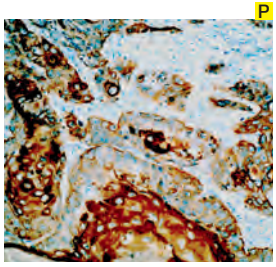

Squamous Cell carcinoma stained with Anti-Cytokeratin using DAB chromogen

Clone:	AE3
Isotype:	IgG
Source:	Mouse
Immunogen:	Total keratin was isolated from human epidermal callus. After heating to 65° C for 10 minutes, the denatured keratins were used as the antigen
Specificity:	Cytokeratin high MW (basic)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx	HX032-YCD

Ready-to-Use (Manual):	**AM133-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM133-10M**
Xmatrx®	**AX133-YCD, AX133-50D**
Concentrated:	**MU133-UC, MU133-5UC**
Recommended Positive Control:	**FG-133M**
Recommended Barrier Control:	**FB-133M**

The cytokeratins are a family of water insoluble proteins (40-70 kD) found in almost all epithelial cell types. Monoclonal cytokeratin antibody AE3 recognizes all basic (Type II) keratins. Since each epithelium contains at least one acidic and one basic keratin, AE3 may be used as a broadly reactive antibody which stains positive for most epithelia and their neoplasms. AE3 has shown great sensitivity and broad specificity for keratins under various conditions of fixation and staining. This antibody stains positive for cytoplasm of most epithelia and their neoplasms.

Cytokeratin, Low MW

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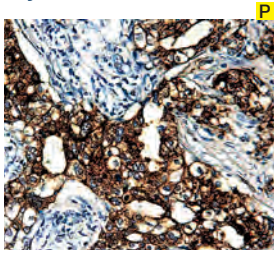

Breast Carcinoma stained with Anti-Cytokeratin using DAB chromogen

Clone:	AE1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human epidermal keratin
Specificity:	40, 48, 50 and 56.5 kD keratins
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM075-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM075-10M**
Xmatrx®	**AX075-YCD, AX075-50D**
Concentrated:	**MU075-UC, MU075-5UC**
Recommended Positive Control:	**FG-075M**
Recommended Barrier Control:	**FB-075M**

The cytokeratins are a family of water insoluble proteins (40-70 kD) found in almost all epithelial cell types. Low molecular weight cytokeratin antibody AE1 has proven to be a widespread histological marker for the restricted staining of the epidermal basal layer of skin and almost all epithelially derived tumors. It can be used as a marker for cells of epithelial origin. This antibody recognizes most type I keratins and shows broad species specificity reacting with keratins of many species including human, rabbit, mouse, bovine, and chick. Staining is usually stronger in alcohol-fixed tissues than in formalin-fixed tissues.

Cytokeratin, Pan

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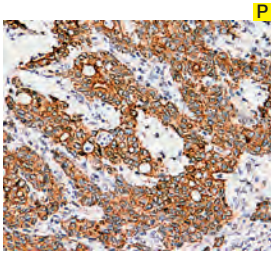


Adenocarcinoma stained with Anti-Cytokeratin Pan using DAB chromogen

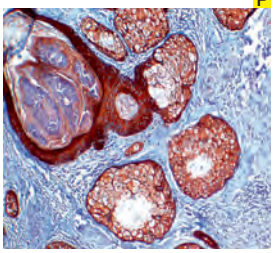
Clone:	Lu-5
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Cells from a lung cancer cell line
Specificity:	Cytokeratins
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM181-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM181-10M**
Xmatrx®	**AX181-YCD, AX181-50D**
Concentrated:	**MU181-UC, MU181-5UC**
Recommended Positive Control:	**FG-181M**
Recommended Barrier Control:	**FB-181M**

The Lu-5 antibody recognizes an epitope on the surface of cytokeratin filaments which is present in a wide range of cytokeratins, except in intermediate-size filament proteins. This epitope may be found in all human epithelia and carcinomas and is resistant to formalin-fixation. The Lu-5 antibody was determined a useful pan cytokeratin marker for the detection of both normal and malignant epithelial and mesothelial cells. The Lu-5 antibody stains surface of cytokeratin filaments in a wide variety of normal and tumor tissues.

Cytokeratin, Pan

P



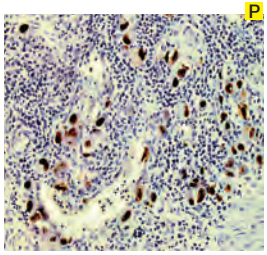
Cytokeratin Pan on skin tissue stained using AEC chromogen

Clone:	C11
Isotype:	IgG1
Source:	Mouse
Immunogen:	Cytoskeletal proteins from A431 cells
Specificity:	Cytokeratins
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM357-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM357-10M**
Xmatrx®	**AX357-YCD, AX357-50D**
Concentrated:	**MU357-UC, MU357-5UC**
Recommended Positive Control:	**FG-357M**
Recommended Barrier Control:	**FB-357M**

Human keratins are a family of water-insoluble proteins with molecular weights ranging from 40-68kD. This monoclonal cytokeratin antibody can be used to detect cytokeratins 4, 5, 6, 8, 10, 13, and 18 in simple or stratified epithelium in most vertebrates including humans. It can be used as a marker for carcinomas as well as some special types of tumors which have an epithelial component or differentiation. This antibody stains cytokeratin in cytoplasm of normal and malignant epithelial cells in formalin-fixed, paraffin-embedded tissue sections, frozen sections or methanol-acetone-fixed culture cells.

Cytomegalovirus (CMV)



Colon tissue stained with anti-CMV using DAB chromogen

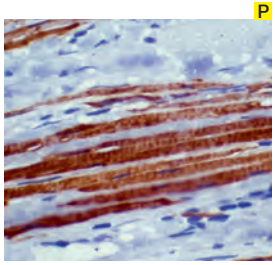
Clone:	BM204
Isotype:	IgG1
Source:	Mouse
Specificity:	Cytomegalovirus
Localization	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM254-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM254-10ME**
Xmatrx®	**AX254-YCDE, AX254-50DE**
Concentrated:	**MU254-UCE, MU254-5UCE**
Recommended Positive Control:	**FG-254ME**
Recommended Barrier Control:	**FB-254ME**

RUO

Cytomegalovirus (CMV) is a member of the family Herpesviridae. It is found in several body fluids including saliva, urine, breast milk, cervical secretions, blood, and semen. This antibody reacts with an early non-structural antigen of 68 kD found in the nucleus of infected cells. This antibody stains CMV particles in infected tissues and does not cross-react with the Herpes viruses.

Desmin



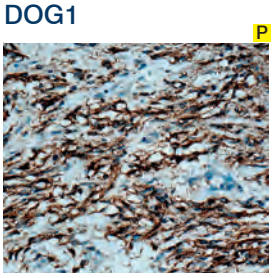
Skeletal muscle fibre stained with Anti-Desmin using DAB chromogen

Clone:	D33
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Purified desmin from human leiomyoma
Specificity:	Desmin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM072-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM072-10M**
Xmatrx®	**AX072-YCD, AX072-50D**
Concentrated:	**MU072-UC, MU072-5UC**
Recommended Positive Control:	**FG-072M**
Recommended Barrier Control:	**FB-072M**

Desmin is a 56 kD intermediate filament expressed by cells of smooth, skeletal, and cardiac muscle. In myofibrils, desmin is localized in skeletal and cardiac muscle Z lines, in regions of cell-cell juncture, at the site of apposition of the Z line with the plasma membrane, and in cardiac intercalated disks. The specificity of desmin to muscle cells makes it a useful marker in identifying sarcomas derived from smooth and striated muscle cells such as leiomyosarcomas and rhabdomyosarcomas. This antibody does not cross-react detectably with GFAP, keratin, vimentin, or neurofilament. This antibody stains positive in muscle cells.

DOG1



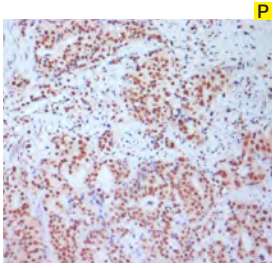
GIST stained with Anti-DOG1 using DAB chromogen

Clone:	1.1
Isotype:	IgG
Source:	Mouse
Immunogen:	A synthetic peptide corresponding to residues in human MUCDOG1 .
Specificity:	DOG1
Localization:	Cytoplasm/Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM570-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM570-10M**
Xmatrx®	**AX570-YCD, AX570-50D**
Concentrated:	**MU570-UC, MU570-5UC**
Recommended Positive Control:	**FG-570M**
Recommended Barrier Control:	**FB-570M**

DOG1 is a cell surface protein selectively expressed in gastrointestinal stromal tumors (GIST). The DOG1 protein shows no homology at the DNA or amino acid level with KIT. DOG1 antibody labels the epithelium of the following organs: breast, prostate, salivary gland, liver, stomach, testis, pancreas, and gallbladder. DOG1 is a useful marker for GISTs, including PDGFRA mutants that fail to express KIT antigen

dsDNA



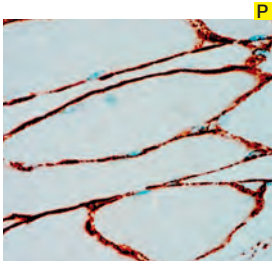
Prostate cancer stained with dsDNA

Clone:	121-3
Isotype:	IgG3
Source:	Mouse
Immunogen:	Nuclei of Burkitt's cells
Specificity:	dsDNA
Localization:	Nuclear
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM934-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM934-10M**
Xmatrx®	**AX934-50D, AX934-YCD**
Concentrated:	**MU934-UC, MU934-5UC**
Recommended Positive Control:	**FG-934M**
Recommended Barrier Control:	**FB-934M**

Anti-double-stranded DNA (dsDNA) monoclonal antibody (MAb) is part of a new panel of reagents which recognizes subcellular organelles or compartments of human cells. This MAb recognizes the double-stranded DNA in human cells and may be useful in the identification of these organelles in cells; tissues; and biochemical preparations. It stains the nuclei in cell or tissue preparations and can be used as a nuclear marker in human cells. This MAb produces a homogeneous staining pattern in the nucleus of normal and malignant cells. DNA holds the genetic instructions for the development and function of living things. In living organisms; DNA does not usually exist as a single molecule; but instead as a tightly associated pair of molecules in the shape of a right-handed double helix. During replication and transcription; portions of the helix unwind and become single-stranded. Protective proteins surround these single-stranded DNA. Double-stranded DNA markers are useful tools in biology research and aid in the study of DNA behavior and characteristics.

Dystrophin



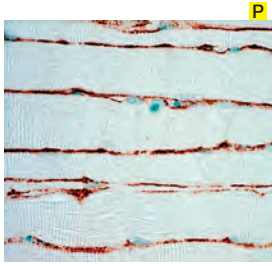
Skeletal muscle stained with Anti-Dystrophin using DAB chromogen

Clone:	Dys1 (Dy4/6D3)
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Bacterial fusion protein containing mid-rod domain of human dystrophin
Specificity:	Dystrophin
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM243-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM243-10M**
Xmatrx®	**AX243-YCD, AX243-50D**
Concentrated:	**MU243-UC, MU243-5UC**
Recommended Positive Control:	**FG-243M**
Recommended Barrier Control:	**FB-243M**

Dystrophin is the protein product of the Duchenne and Becker muscular dystrophy (DMD/BMD) gene with a relative molecular mass of 400 kD. This monoclonal antibody reacts with an epitope spanning the mid-rod domain between amino acids 1181 and 1388 of human dystrophin. It stains skeletal, cardiac, and smooth muscle dystrophin from normal human membrane in tissue and some animals.

Dystrophin



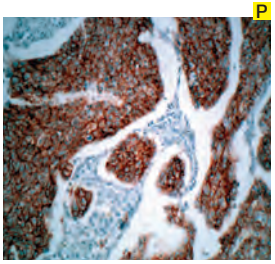
Skeletal muscle stained with Anti-Dystrophin using AEC chromogen

Clone:	Dys2 (Dy8/6C5)
Isotype:	IgG1
Source:	Mouse
Immunogen:	Synthetic polypeptide consisting of the last 17 amino acids at the carboxy terminus of the human dystrophin sequence
Specificity:	Dystrophin
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM244-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM244-10M**
Xmatrx®	**AX244-YCD, AX244-50D**
Recommended Barrier Control:	**FG-244M**
Recommended Barrier Control:	**FB-244M**

Dystrophin is the protein product of the Duchenne and Becker muscular dystrophy (DMD/BMD) gene with a relative molecular mass of 400 kD. Antibodies to dystrophin show that DMD individuals lack dystrophin in their muscle cells or that dystrophin is present at very low levels, whereas BMD individuals produce a protein with reduced abundance or abnormal size. This monoclonal antibody reacts with an epitope spanning the mid-rod domain between amino acids 1181 and 1388 of human dystrophin. This antibody stains membrane in skeletal, cardiac, and smooth muscle dystrophin from normal human tissue and some animals.

E-Cadherin



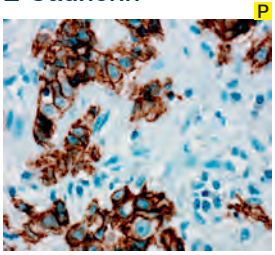
Membranous positivity of E-Cadherin on Colon carcinoma stained using DAB chromogen

Clone:	36
Isotype:	IgG1
Source:	Mouse
Immunogen:	C-terminal peptide of human E-cadherin
Specificity:	E-Cadherin
Localization:	Membrane
Pre-treatment:	EZ-AR1 elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM390-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM390-10M**
Xmatrx®	**AX390-YCD, AX390-50D**
Concentrated:	**MU390-UC, MU390-5UC**
Recommended Positive Control:	**FG-390M**
Recommended Barrier Control:	**FB-390M**

E-Cadherin (123-kD) is a cell surface glycoprotein responsible for Ca^{2+}-dependent intercellular adhesion between epithelial cells. Alterations in the cell-cell adhesion mechanism mediated by E-Cadherin which is lightly associated with alpha catenin may have implications in the metastatic potential of prostate cancer. E-Cadherin may also play a role in adhesion of dendritic epidermal T cells to keratinocytes. Clone 36 may be used to investigate the process of tumor invasion.

E-Cadherin



Breast carcinoma stained with anti-E-cadherin using DAB chromogen

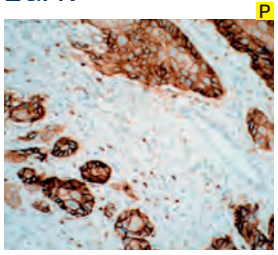
Clone:	EP6
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in the 5th cadherin domain of human E-Cadherin protein.
Specificity:	E-Cadherin
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN725-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN725-10M**
Xmatrx®	**AY725-YCD, AY725-50D**
Concentrated:	**NU725-UC, NU725-5UC**
Recommended Positive Control:	**FG-725N**
Recommended Barrier Control:	**FB-725N**

E-Cadherin is a transmembrane glycoprotein that plays an important role in epithelial cell adhesion. In prostate cancers, the expression of E-cadherin is reported to be reduced or absent in comparison with its expression in normal prostate which is uniformly strong. A decreased expression of E-Cadherin is associated with metastatic potential and poor prognosis in breast cancer and esophagus cancer. In combination with p120 Catenin or Cytokeratin, it is useful for the differentiation between ductal (E-Cadherin positive) and lobular (E-Cadherin negative) breast carcinomas. It may also help in diagnosis of mesothelioma.

EGFR

P



Lung sarcoma stained with anti-Human EGFR using DAB chromogen

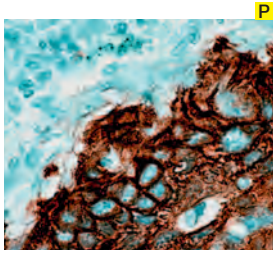
Clone:	EP22
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic phoshpeptide corresponding to residues Tyr1068 of human EGFR was used as immunogen.
Specificity:	Human EGFR
Localization:	Nuclear and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN781-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN781-10ME**
Xmatrx®	**AY781-YCDE, AY781-50DE**
Concentrated:	**NU781-UCE, NU781-5UCE**
Recommended Positive Control:	**FG-781NE**
Recommended Barrier Control:	**FB-781NE**

Epidermal growth factor receptor (EGFR) is a 170 kDa transmembrane glycoprotein receptor tyrosine kinase that, activated by epidermal growth factor (EGF), affects cell growth and differentiation. The antibody detects both EGFR phosphorylated on Tyr1068 of the nature human isoform 1 (corresponding to Y1092 from the precursor form P00533-1/p170), and also unphosphorylated EGFR. It is associated with a number of cancers, including lung cancer, anal cancers[7] and glioblastoma multiforme. In breast cancer, EGFR is predominately expressed in basal cell-like carcinoma; it has been recommendated for identification of basal-like breast carcinoma along with Cytokeratin 5/6.

EGFR

P



Squamous Cell carcinoma stained with Anti-EGFR using DAB chromogen

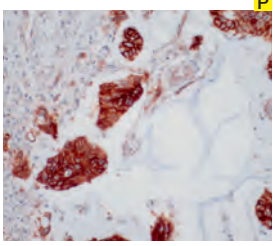
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Synthetic peptide encompassing amino 1195 through 1210 of human EGFR
Specificity:	Epidermal Growth Factor Receptor
Localization:	Membrane+Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR335-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR335-10RE**
Xmatrx®	**AW335-YCDE, AW335-50DE**
Concentrated:	**PU335-UPE, PU335-5UPE**
Recommended Positive Control:	**FG-335PE**
Recommended Barrier Control:	**FB-335PE**

EGFR (LRVAP) reacts with the 170 kD EGFR transmembrane glycoprotein. It binds specifically to the intracellular portion, regardless of phosphorylation state. The extracellular domain binds epidermal growth factor (EGF) as a proliferation signal. The EGFR antibody is made against a sequence which is unique from related tyrosine kinase receptors and hence shows no cross-reactivity.

Ep-CAM

P



Adenoma stained with anti-Human Ep-CAMusing DAB chromogen

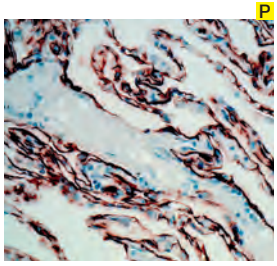
Clone:	EP155
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human epithelial antigen (EpCAM) protein. Ep-CAM is a highly conserved type I transmembrane glycoprotein and is expressed on most normal and malignant epithelial cells
Specificity:	Human Ep-CAM
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN820-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN820-10M**
Xmatrx®	**AY820-YCD, AY820-50D**
Concentrated:	**NU820-UC, NU820-5UC**
Recommended Positive Control:	**FG-820N**
Recommended Barrier Control:	**FB-820N**

Ep-CAM is a highly conserved type I transmembrane glycoprotein and is expressed on most normal and malignant epithelial cells. Ep-CAM is also known as epithelial cell adhesion molecule or MOC31, Ber-EP4. It is detected at the membrane/cytoplasm of the majority of epithelial tissues (all simple, pseudo-stratified and transitional epithelial), with the exception of the adult squamous epithelium and some epithelium-derived cell, such as hepatocytes, epidermal keratinocytes, gastric parietal cells, myoepithelial cells, and thymic cortical epithelium. In tumors, Ep-CAM is over expressed by the majority of human epithelial carcinomas, except hepatocellular carcinomas (HCC).

Epithelial Membrane Antigen (EMA)

P



Pancreatic tissue showing positivity for EMA stained using DAB chromogen

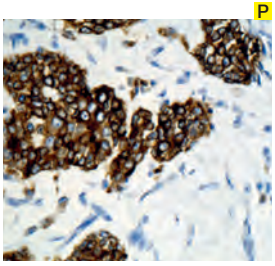
Clone:	E29
Isotype:	IgG2a Kappa
Source:	Mouse
Immunogen:	Delipidated extract of human cream
Specificity:	EMA
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM057-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM057-10M**
Xmatrx®	**AX057-YCD, AX057-50D**
Concentrated:	**MU057-UC, MU057-5UC**
Recommended Barrier Control:	**FB-057M**
Recommended Barrier Control:	**FB-057M**

Epithelial Membrane Antigen (EMA), also known as milk fat globule membrane protein, is present on the luminal surface of mammary gland epithelium. Although EMA is primarily located in mammary gland epithelium, other normal epithelia (e.g., lung) will also react against EMA antibody. Cells obtained from solid metastases and pleural effusions accompanying a breast cancer will react with EMA antibody. It may also be useful for identification of meningioma. Human colon carcinoma, osteosarcoma, kidney carcinoma, hepatocellular carcinomas, adrenal carcinoma, embryonal carcinoma, liposarcoma, lung carcinoma, and mixed parotid tumor do not stain with EMA antibody.

Epithelial Membrane Antigen (EMA)

P



Breast Carcinoma stained with Anti-EMA using DAB chromogen

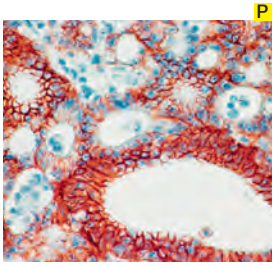
Clone:	Mc5
Isotype:	IgG1
Source:	Mouse
Immunogen:	Delipidated human milk fat globules
Specificity:	Epithelial membrane antigen
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM182-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM182-10M**
Xmatrx®	**AX182-YCD, AX182-50D**
Concentrated:	**MU182-UC, MU182-5UC**
Recommended Positive Control:	**FG-182M**
Recommended Barrier Control:	**FB-182M**

The mucin antigen recognized by Mc5 is a glycosylated molecule with a molecular mass of 400 kD. The sequence to which this antibody binds is Thr-Arg-Pro-Ala-Pro. Although EMA is primarily located in mammary gland epithelium, other normal epithelia (e.g., lung) will also react against EMA antibody. Staining, however, is the strongest in mammary epithelia. The combination of positive staining for keratin with negative EMA can be used to phenotype the above-mentioned epithelial tumors.

Epithelial Specific Antigen

P



Adenocarcinoma stained with Anti-ESA using AEC chromogen

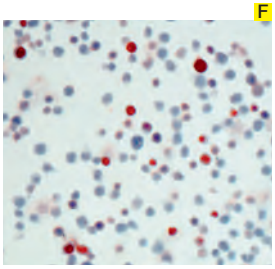
Clone:	MOC-31
Isotype:	IgG1
Source:	Mouse
Immunogen:	Cell line from small cell lung carcinoma, CD2 epithelial antigen
Specificity:	40 kD epithelial-specific cluster 2 antigen
Localization:	Membrane
Pre-treatment:	EZ-AR1 elegance
Manual/i6000	HK546-XAK
Xmatrx	HX031-YCD

Ready-to-Use (Manual):	**AM316-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM316-10M**
Xmatrx®	**AX316-YCD, AX316-50D**
Concentrated:	**MU316-UC, MU316-5UC**
Recommended Positive Control:	**FG-316M**
Recommended Barrier Control:	**FB-316M**

Monoclonal antibody MOC-31 recognizes the cluster 2 antigen which is a 40 kD transmembrane glycoprotein present on the membrane of epithelial cells. Since MOC-31 reacts with virtually all normal epithelia and adenocarcinomas but not with mesothelial cells, this antibody can serve as a reliable marker for determining the origin of pleural and peritoneal tumors. This antibody stains a membrane glycoprotein on epithelial cells, but not mesothelial cells.

Epstein-Barr Virus (EBV) Early Antigen

F



Cell Culture Slide stained with Anti-EBV using AEC chromogen

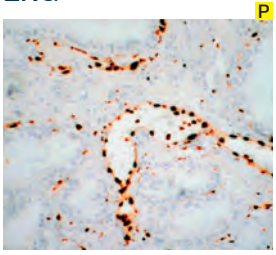
Clone:	1108-1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Immunoprecipitated EBV early antigens
Specificity:	Immunoprecipitated EBV early antigens
Localization:	Nucleus/Cytoplasm
Pre-treatment:	None

Ready-to-Use (Manual):	**AM222-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM222-10ME**
Xmatrx®	**AX222-YCDE, AX222-50DE**
Concentrated:	**MU222-UCE, MU222-5UCE**
Recommended Positive Control:	**FG-222ME**
Recommended Barrier Control:	**FB-222ME**

This antibody produces an intense, diffuse or speckled staining pattern in the nucleus of paraformaldehyde/acetone-fixed cells expressing the early antigen of EBV by immunohistochemical techniques.

ERG

P



Prostate stained with anti-Human ERG using DAB chromogen

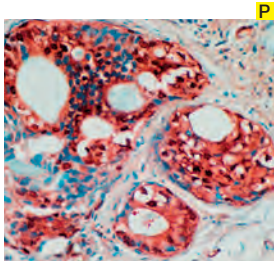
Clone:	EP111
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the C-terminus of human ERG Protein
Specificity:	Human ERG
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN782-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN782-10M**
Xmatrx®	**AY782-YCD, AY782-50D**
Concentrated:	**NU782-UC, NU782-5UC**
Recommended Positive Control:	**FG-782N**
Recommended Barrier Control:	**FB-782N**

ERG is directed against the C-terminus of the ETS transcription regulator, ERG, and is capable of detecting both wildtype ERG, and truncated ERG resulting from ERG gene rearrangement. This antibody exhibits a nuclear staining pattern and may be used to aid in the identification of prostate adenocarcinomas through the detection of truncated ERG. This ERG antibody also recognizes Fli-1 by western blot analysis.

Estradiol

P



Breast carcinoma stained with Anti-Estradiol using AEC chromogen

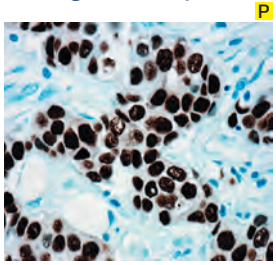
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	17-beta-estradiol conjugated to bovine serum albumin.
Specificity:	Estradiol
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR038-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR038-10R**
Xmatrx®	**AW038-YCD, AW038-50D**
Recommended Positive Control:	**FG-038P**
Recommended Barrier Control:	**FB-038P**

Estradiol plays an important role in the genesis and development of human breast cancer and endometrial carcinoma. It is synthesized primarily in the ovary, but also in the placenta, testis, and possibly the adrenal cortex. Estradiol is also produced by testicular Leydig tumors, as well as by Sertoli tumors of the testis and ovary. It is also produced in mammary gland carcinoma, and carcinoma of the adrenal cortex.

Estrogen Receptor

P



Breast carcinoma stained with Anti-ER-Alpha using DAB chromogen

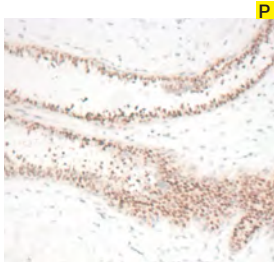
Clone:	EP1
Isotype:	IgG
Source:	Rabbit
Immunogen:	Recombinant Estrogen Receptor protein
Specificity:	Estrogen receptor protein
Localization:	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN710-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN710-10ME**
Xmatrx®	**AY710-YCDE, AY710-50DE**
Concentrated:	**NU710-UCE, NU710-5UCE**
Recommended Positive Control:	**FG-710NE**
Recommended Barrier Control:	**FB-710NE**

Estrogen Receptor-Alpha (ER Alpha) is a nuclear protein and member of the steroid hormone receptor family. ER Alpha possess both DNA binding and ligand binding domains, and exerts a significant role in activating the transcription of certain genes. Ligand-dependent dimerization and phosphorylation both function to regulate the transcriptional activation of ER alpha. This antibody stains nucleus of neoplastic cells in the breast ductal carcinoma tissues by immunohistochemical techniques.

Estrogen Receptor α

P



Breast cancer stained with ERα

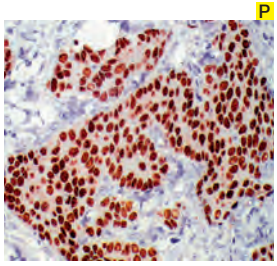
Clone:	ESR1/1935
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Recombinant full-length human ERα protein
Specificity:	ERα
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM924-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM924-10ME**
Xmatrx®	**AX924-50DE, AX924-YCDE**
Concentrated:	**MU924-UCE, MU924-5UCE**
Recommended Positive Control:	**FG-924ME**
Recommended Barrier Control:	**FB-924ME**

Estrogen Receptor alpha (ERα) is specific to ER alpha and shows minimal cross-reaction with other members of the family. ER is an important regulator of growth and differentiation in the mammary gland. Presence of ER in breast tumors indicates an increased likelihood of response to anti-estrogen (e.g. tamoxifen) therapy. It strongly stains nuclei of epithelial cells in breast carcinomas.

Estrogen Receptor (InSite® ER)

P



Breast carcinoma stained with Anti-ER using DAB chromogen

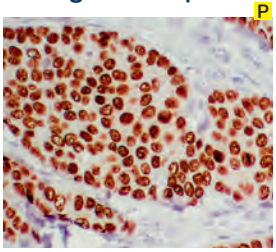
Clone:	ER88
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant Estrogen Receptor protein
Specificity:	Estrogen receptor protein
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx	HX032-YCD

Ready-to-Use (Manual):	**AM368-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM368-10ME**
Xmatrx®	**AX368-YCDE, AX368-50DE**
Concentrated:	**MU368-UCE, MU368-5UCE**
Recommended Positive Control:	**FG-368ME**
Recommended Barrier Control:	**FB-368ME**

Estrogen receptor (ER) content of breast cancer tissue is an important parameter in the prediction of prognosis and response to endocrine therapy. Highly specific monoclonal antibodies to ER have allowed the determination of receptor status of breast tumors to be carried out. This antibody stains the nucleus of receptor positive cells.

Estrogen Receptor-Beta (ER-β)

P



Breast carcinoma stained with Anti-ER-beta using DAB chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	A 17-mer sequence close to carboxy-terminus of ER-β protein was chosen to be the template for synthesis of a 4-branch Multiple Antigenic Peptide (MAP)
Specificity:	Estrogen Receptor-β protein
Localization:	Nucleus
Pre-treatment:	EZ-AR1 elegance
Manual/i**6000**:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AR385-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR385-10R**
Xmatrx®	**AW385-YCD, AW385-50D**
Concentrated:	**PU385-UP, PU385-5UP**
Recommended Positive Control:	**FG-385P**
Recommended Barrier Control:	**FB-385P**

Human Estrogen Receptor beta (ERb) is highly homologous to human ERa and displays 96% and 58% homology in the DNA and hormone binding domains, respectively. Human ERb mRNA is expressed in testis, prostate, thyroid, ovary, and smooth muscle. ERb is expressed in various normal and neoplastic cells. The rabbit polyclonal antibody ERb88 is directed against human ERb protein and marks nuclei of many different cells on formalin-fixed, paraffin-embedded tissue sections.

Factor VIII-Related Antigen

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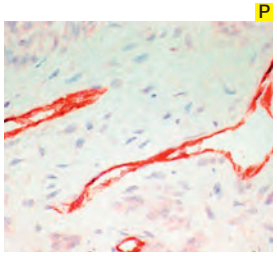


Leiomyoma stained with Anti-FVIII using AEC chromogen

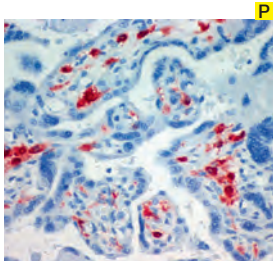
Clone:	F8 2.2.9
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Purified Human Factor VIII
Specificity:	Factor VIII-related antigen
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM016-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM016-10M**
Xmatrx®	**AX016-YCD, AX016-50D**
Concentrated:	**MU016-UC, MU016-5UC**
Recommended Positive Control:	**FG-016M**
Recommended Barrier Control:	**FB-016M**

This antigen has proven to be one of the best available immunohistochemical markers for the identification of endothelial cells. Demonstration of Factor VIII-related antigen by immunohistochemical staining has been suggested to identify vascular invasion by neoplasms.

Factor XIII Subunit A

P



Factor XIII A positivity in placenta stained using AEC chromogen

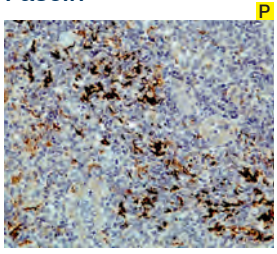
Clone:	E980.1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Prokaryotic recombinant protein corresponding to a portion of the C-terminus of factor XIIIa molecule
Specificity:	Coagulation Factor XIIIa
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx	HX032-YCD

Ready-to-Use (Manual):	**AM337-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM337-10M**
Xmatrx®	**AX337-YCD, AX337-50D**
Concentrated:	**MU337-UC, MU337-5UC**
Recommended Positive Control:	**FG-337M**
Recommended Barrier Control:	**FB-337M**

The enzyme Factor XIII is a protransglutaminase involved in the final part of the coagulation pathway, stabilizing clot formation by cross-linking fibronectin to collagen. Factor XIII is found within a variety of dendritic cells in connective tissues. It plays a general role in various processes such as cell proliferation and tissue remodeling, including embryonic and fetal embryogenesis, wound healing, atherosclerosis, and tumor growth. This antibody stains the cytoplasm of positive cells.

Fascin

P



Lymph Node stained with Anti-Fascin using DAB chromogen

Clone:	FCN01
Isotype:	IgG
Source:	Mouse
Immunogen:	Fascin purified from HeLa cells
Specificity:	Fascin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM488-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM488-10M**
Xmatrx®	**AX488-YCD, AX488-50D**
Concentrated:	**MU488-UC, MU488-5UC**
Recommended Positive Control:	**FG-488M**
Recommended Barrier Control:	**FB-488M**

Human fascin is a highly conserved actin-binding protein. Fascin, encoded by the human homolog for the sn (hsn) gene, has been localized to microspikes and stress fibers of cultured cells where it is thought to be involved in the formation of microfilament bundles. It is expressed predominantly in dendritic cells. Lymphoid cells, myeloid cells and plasma cells are negative. However. Reed Sternberg cells in Hodgkin's lymphoma are positive for fascin staining. Epstein-Barr virus may induce expression of fascin in B cells.

Ferritin Light Chain

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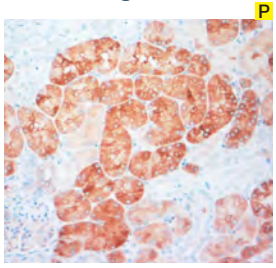


Kidney tissue stained with Ferritin light chain antibody

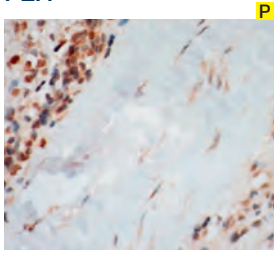
Clone:	FTL/1389
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant human FTL protein fragment
Specificity:	FTL
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM935-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM935-10M**
Xmatrx®	**AX935-50D, AX935-YCD**
Concentrated:	**MU935-UC, MU935-5UC**
Recommended Positive Control:	**FG-935M**
Recommended Barrier Control:	**FB-935M**

Ferritin is the major intracellular iron storage protein in prokaryotes and eukaryotes. A major function of ferritin is the storage of iron in a soluble and nontoxic state. Mammalian ferritins consist of 24 subunits made up of 2 types of polypeptide chains: ferritin heavy chain and ferritin light chain. Ferritin heavy chains catalyze the first step in iron storage - the oxidation of Fe (II); whereas ferritin light chains promote the nucleation of ferrihydrite; enabling storage of Fe (III). Light chain ferritin is involved in cataracts by at least two mechanisms (hereditary hyperferritinemia cataract syndrome) in which light chain ferritin are overexpressed in serum and tissues.

FLI1

P



Ewings sarcoma stained with anti-Human FLI1 using DAB chromogen

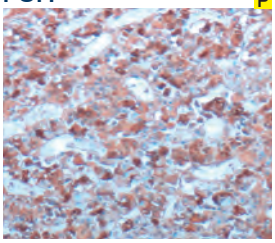
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	FLI1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 52-80 amino acids from the N-terminal region of human FLI1.
Specificity:	Human FLI1
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR798-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR798-10R**
Xmatrx®	**AW798-YCD, AW798-50D**
Concentrated:	**PU798-UP, PU798-5UP**
Recommended Positive Control:	**FG-798P**
Recommended Barrier Control:	**FB-798P**

Defects in FLI1 are a cause of Ewing sarcoma (ES), a highly malignant, metastatic, primitive small round cell tumor of bone and soft tissue that affects children and adolescents. It belongs to the Ewing sarcoma family of tumors, a group of morphologically heterogeneous neoplasms that share the same cytogenetic features. They are considered neural tumor derived from cells of the neural crest. Ewing sarcoma represents the less differentiated form of the tumors. Note: A chromosomal aberration involving FLI1 is found in patients with Ewing sarcoma.

FSH

P



Pituitary stained with anti-Human FSH using DAB chromogen

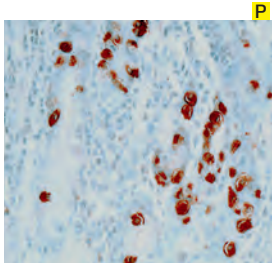
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	Gives a positive and specific immunostaining of FSH-containingcells. Also shows reactivity to LH containing cells
Specificity:	Human FSH
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AR766-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR766-10R**
Xmatrx®	**AW766-YCD, AW766-50D**
Concentrated:	**PU766-UP, PU766-5UP**
Recommended Positive Control:	**FG-766P**
Recommended Barrier Control:	**FB-766P**

Follicle stimulating hormone enables ovarian folliculogenesis to the antral follicle stage and is essential for Sertoli cell proliferation and maintenance of sperm quality in the testis. Members of the pituitary glycoprotein hormone family, of which FSH is one (see also luteinizing hormone, chorionic gonadotropin, and thyroid stimulating hormone),consist of a shared alpha chain and a beta chain encoded by a separate gene. The FSHB gene encodes the beta subunit of follicle stimulating hormone.Tumors that do not consist of adenohypophysial cells neither produce nor contain pituitary hormone, and thus immunoperoxidase techniques are helpful in distinguishing them from those pituitary tumors that store various hormones in the cell cytoplasm. FSH, a glycoprotein hormone, stimulates the graafian follicles of the ovary and assists subsequently in follicular maturation and the secretion of estradiol. In the male, it stimulates the epithelium of the seminiferous tubules and is partially responsible for inducing spermatogenesis.

Gastrin

P



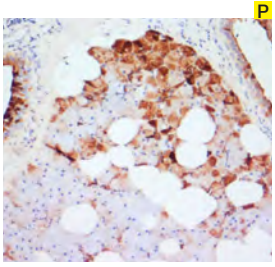
Stomach tissue stained with Anti-Gastrin using DAB chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Synthetic human Gastrin-I bound to keyhole limpet hemocyanin (KLH) with carbodiimide
Specificity:	Gastrin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR 1
Manual/i6000:	None
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AR019-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR019-10R**
Xmatrx®	**AW019-YCD, AW019-50D**
Concentrated:	**PU019-UP, PU019-5UP**
Recommended Positive Control:	**FG-019P**
Recommended Barrier Control:	**FB-019P**

The major source of Gastrin in the body is the antropyloric mucosa of the stomach. Significant increases in the antropyloric G-cell (gastrin producers) population occur in a wide variety of clinical conditions such as atrophic gastritis, pernicious anemia, gastric carcinoma, gastric outlet obstruction, Zollinger-Ellison syndrome, and duodenal ulcer disease. Neoplastic proliferations of the gastrin producing cells are frequently associated with the Zollinger-Ellison syndrome.

GCDFP-15



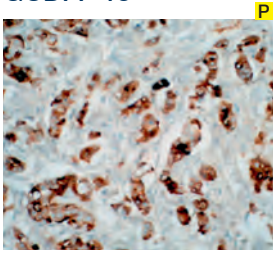
Breast cancer stained with GCDFP-15

Clone:	PIP/1571
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Recombinant human GCDFP-15 protein fragment
Specificity:	GCDFP-15
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM953-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM953-10M**
Xmatrx®	**AX953-50D, AX953-YCD**
Concentrated:	**MU953-UC, MU953-5UC**
Recommended Positive Control:	**FG-953M**
Recommended Barrier Control:	**FB-953M**

Anti-GCDFP-15 (Gross cystic disease fluid protein 15) monoclonal antibody recognizes GCDFP-15 protein of 15 kDa. It is a major protein component of benign breast gross cysts. It is a known marker of breast cancer as it is found in approximately 50% of all breast cancer specimens. GCDFP-15, also known as prolactin-inducible protein (PIP) is a prolactin and androgen controlled protein. This antibody is useful in the identification of metastatic breast carcinoma or fluid analysis.

GCDFP-15



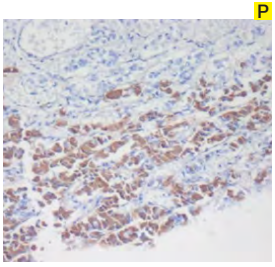
Breast cancer tissue stained with anti-Human GCDFP-15 using DAB chromogen

Clone:	EP95
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human Gross Cystic Disease Fluid Protein-15.
Specificity:	Human GCDFP-15
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK /HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN856-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN856-10M**
Xmatrx®	**AY856-YCD, AY856-50D**
Concentrated:	**NU856-UC, NU856-5UC**
Recommended Positive Control:	**FG-856N**
Recommended Barrier Control:	**FB-856N**

Gross cystic disease fluid protein (GCDFP-15), also called prolactin inducible protein (PIP), is a single polypeptide chain with a versatile function in human reproductive and immunological systems. It is up regulated by prolactin and androgens, while it is down regulated by estrogen. In normal adult tissues, GCDFP-15 expression was found in all apocrine, lacrimal, ceruminous, and Moll's glands and in numerous serous cells of the submandibular, sublingual, and minor salivary glands. The serous cells of nasal and bronchial glands were also positive. It is used as a marker of apocrine differentiation. GCDFP-15 has been found in the cyst fluid of cystic breast disease and primary and metastatic breast cancer, and considered a highly specific marker for identification of breast cancer. GCDFP-15 expression has also been found in other cancer types including salivary glands, sweat glands, prostate, and lung.

Growth Hormone



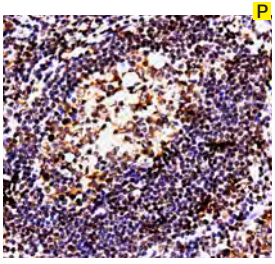
Pituitary tissue stained with GH

Clone:	GH/1450
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Human Growth Hormone
Specificity:	GH
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM925-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM925-10ME**
Xmatrx®	**AX925-50DE, AX925-YCDE**
Concentrated:	**MU925-UCE, MU925-5UCE**
Recommended Positive Control:	**FG-925ME**
Recommended Barrier Control:	**FB-925ME**

Pituitary growth hormone (GH) plays a crucial role in stimulating and controlling the growth, metabolism, and differentiation of many mammalian cell types by modulating the synthesis of multiple mRNA species. These effects are mediated by the binding of GH to its membrane-bound receptor and involve a phosphorylation cascade that results in the modulation of numerous signaling pathways. GH is synthesized by acidophilic or somatotropic cells of the anterior pituitary gland. Anti-GH is a useful marker in the classification of pituitary tumors and the study of pituitary disease (acromegaly).

GITR



Tonsil stained with Anti-GITR using DAB chromogen

Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	Synthetic peptide derected towards the C terminal of human TNFRSF18
Specificity:	Human GITR
Localization:	Cell Membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR915-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR915-10RE**
Xmatrx®	**AW915-YCDE, AW915-50DE**
Concentrated:	**PU915-UPE, PU915-5UPE PU915-1UPE**
Recommended Positive Control:	**FG-915PE**
Recommended Barrier Control:	**FB-915PE**

GITR (Glucocorticoid-induced TNF receptor family-regulated gene), also known as TNFRS18, belongs to the TNF receptor superfamily (TNFRS). GITR is widely expressed in different cells of the immune system and its activation triggers the production of proinflammatory cytokines. GITR is constitutively expressed at high levels on Tregs and at low levels on naive and memory T cells. Activation of GITR with its ligand (GITRL) or with anti-GITR agonist antibodies (such as DTA-1) provides strong costimulatory signals for T cells. Furthermore, activation of GITR with agonistic antibodies has been shown to amplify the antitumor immune responses in animal models by increasing the proliferation and function of effector T cells and possibly also by abrogating the suppressive function of Tregs cells.

GFAP

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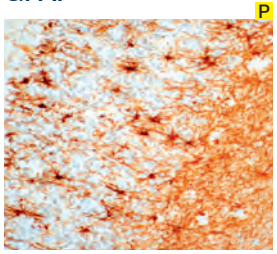


Cerebrum stained with anti-Human GFAP using DAB chromogen

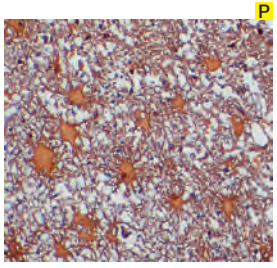
Clone:	EP13
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the C-terminus of human Glial Fibrillary Acidic Protein
Specificity:	Human GFAP
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN783-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN783-10M**
Xmatrx®	**AY783-YCD, AY783-50D**
Concentrated:	**NU783-UC, NU783-5UC**
Recommended Positive Control:	**FG-783N**
Recommended Barrier Control:	**FB-783N**

Glial Fibrillary Acidic Protein (GFAP) belongs to the class III of the intermediate filament proteins highly specific to astrocytes in the brain. It detects astrocytes, Schwann cells, satellite cells, enteric glial cells, and some groups of ependymal cells GFAP is used to differentiate astrocytoma from nonglial cell tumors.

Glial Fibrillary Acidic Protein (GFAP)

P



Astrocytes and other acidic fibers in cerebrum stained with Anti-GFAP using DAB chromogen

Clone:	GA-5
Isotype:	IgG1
Source:	Mouse
Immunogen:	GFAP isolated from porcine spinal cord
Specificity:	Glial fibrillary acidic protein (GFAP)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM020-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM020-10M**
Xmatrx®	**AX020-YCD, AX020-50D**
Concentrated:	**MU020-UC, MU020-5UC**
Recommended Positive Control:	**FG-020M**
Recommended Barrier Control:	**FB-020M**

Glial Fibrillary Acidic Protein (GFAP) is the subunit of the glial specific "intermediate" filament that includes desmin filaments in smooth muscle, vimentin filaments in cultured fibroblasts, keratin filaments in epithelium and neurofilaments in neural cells. This antibody stains human GFAP in positive astrocytes and other positive cells.

Glial Fibrillary Acidic Protein (GFAP)

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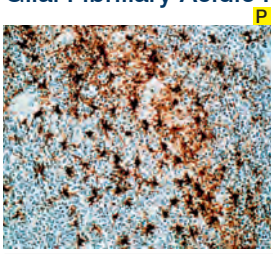


Cerebellum tissue stained with Anti-GFAP using DAB chromogen

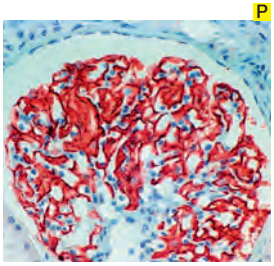
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	GFAP isolated from bovine spinal cord.
Specificity:	Glial fibrillary acidic protein (GFAP)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR020-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR020-10R**
Xmatrx®	**AW020-YCD, AW020-50D**
Concentrated:	**PU020-UP, PU020-5UP**
Recommended Positive Control:	**FG-020P**
Recommended Barrier Control:	**FB-020P**

Glial Fibrillary Acidic Protein (GFAP) is the subunit of the glial specific "intermediate" filament that includes desmin filaments in smooth muscle, vimentin filaments in cultured fibroblasts, keratin filaments in epithelium and neurofilaments in neural cells. This antibody stains GFAP from many species including human, mouse, and rat in cytoplasm of astrocytes and Bergmann glia.

Glomerular Epithelial Protein 1 (GLEPP-1)

P



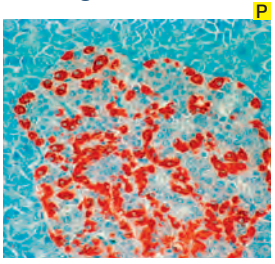
Kidney tissue stained with Anti-GLEPP-1 using AEC chromogen

Clone:	5C11
Isotype:	IgG2b
Source:	Mouse
Immunogen:	GLEPP-1 fusion protein
Specificity:	GLEPP1
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM336-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM336-10M**
Xmatrx®	**AX336-YCD, AX336-50D**
Concentrated:	**MU336-UC, MU336-5UC**
Recommended Positive Control:	**FG-336M**
Recommended Barrier Control:	**FB-336M**

Glomerular epithelial protein 1 (GLEPP1) is a transmembrane protein tyrosine phosphatase found only in the epithelial cells of the renal glomerulus.The monoclonal antibody 5C11 has been raised against a fusion protein made from part of its extracellular domain. In the normal glomerulus, GLEPP1 is present only in visceral glomerular cells (podocytes). The presence of GLEPP1 may be used as a marker of podocyte integrity in various forms of glomerular injury. This antibody stains human GLEPP1 protein in the epithelial cells of the renal glomerulus.

Glucagon



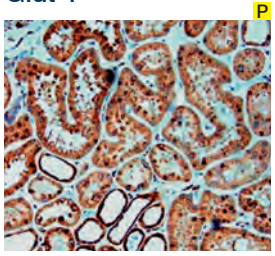
Pancreas tissue stained with Anti-Glucagon using AEC chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Synthetic human glucagon
Specificity:	Glucagon
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR039-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR039-10R**
Xmatrx®	**AW039-YCD, AW039-50D**
Concentrated:	**PU039-UP, PU039-5UP**
Recommended Positive Control:	**FG-039P**
Recommended Barrier Control:	**FB-039P**

Glucagon is a polypeptide of 29 amino acids produced by the pancreatic alpha cells. In addition to its well known effect of elevating blood glucose concentration, glucagon functions to inhibit gastric and pancreatic secretions. Tumors producing large amounts of glucagon are referred to as glucagonomas. This antibody stains the cytoplasm in A cells of the endocrine pancreas and reacts with glucagon in a number of mammalian species.

Glut-1



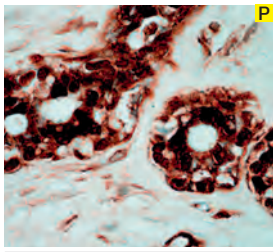
Kidney tissue stained with Anti-Glut-1 using DAB chromogen

Clone:	SPM498
Isotype:	IgG
Source:	Mouse
Immunogen:	Glut-1 purified from Primary cultures of myoblasts.
Specificity:	GLUT-1
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM505-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM505-10M**
Xmatrx®	**AX505-YCD, AX505-50D**
Concentrated:	**MU505-UC, MU505-5UC**
Recommended Positive Control:	**FG-505M**
Recommended Barrier Control:	**FB-505M**

Glucose is fundamental to the metabolism in mammalian cells. Several glucose transporter protein (Glut) isoforms have been identified and shown to function in response to insulin and IGF-1 induced signaling. GLUT-1 is detectable in many human tissues including those of the colon, lung, stomach, esophagus, and breast. GLUT-1 immunoreactivity in some cancers, including trans carcinoma of the urinary bladder, has been associated with aggressive behavior.

Glutathione S-Transferase Pi (GST Pi)



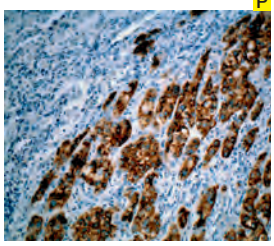
GST Pi positivity in breast carcinoma stained using DAB chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Purified proteins from the cytosol of a human chronic lymphoblastic spleen
Specificity:	Glutathione S-transferase pi
Localization:	Nucleus & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR249-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR249-10R**
Xmatrx®	**AW249-YCD, AW249-50D**
Concentrated:	**PU249-UP, PU249-5UP**
Recommended Positive Control:	**FG-249P**
Recommended Barrier Control:	**FB-249P**

Glutathione S-Transferases (GSTs) are a multigene family of enzymes centrally involved with drug metabolism and detoxification. All eukaryotic species possess multiple cytosolic and membrane-bound GST isoenzymes, each of which displays distinct catalytic as well as noncatalytic binding properties.

Glypican-3 (GPC3)



Hepatocellular carcinoma stained with Anti-Glypican-3 using DAB chromogen

Clone:	GPC3-88
Isotype:	IgG
Source:	Mouse
Immunogen:	Glypican-3 is a mouse monoclonal antibody derived from cell culture supernatant
Specificity:	Glypican
Localization:	Cytoplasm/Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

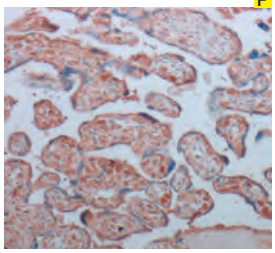
Ready-to-Use (Manual):	**AM539-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM539-10M**
Xmatrx®	**AX539-YCD, AX539-50D**
Concentrated:	**MU539-UC, MU539-5UC**
Recommended Positive Control:	**FG-539M**
Recommended Barrier Control:	**FB-539M**

RUO

Glypican-3 (GPC3) is a glycosylphospatidyl inositol-anchored membrane protein, which may also be found in a secreted form. GPC3 belongs to the glypican family of heparan sulfate proteoglycans. This protein may be involved in the suppression/modulation of growth in the predominantly mesodermal tissues and organs. Glypican-3 is thought to regulate tissue and organ growth through interactions with growth factors such as insulin-like growth factor II or fibroblast growth factor 2. For research use only. Not for use in diagnostic procedures.

Glycophorin A+B (E3)

P



Glyco stained with anti-Human HIR2 using DAB chromogen

Clone:	E3
Isotype:	IgG
Source:	Mouse
Immunogen:	peptide corresponding to human Glycophorin A +B (N-terminal)
Specificity:	Human HIR2
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

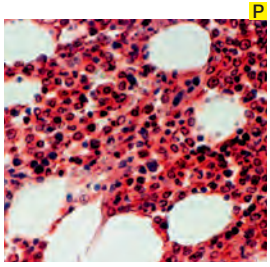
Ready-to-Use (Manual):	**AM889-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM889-10M**
Xmatrx®	**AY889-YCD, AY889-50D**
Concentrated:	**MU889-UC, MU889-5UC**
Recommended Positive Control:	**FG-889M**
Recommended Barrier Control:	**FB-889M**

RUO

Glycophorins A, B and C are sialoglycoproteins of the human erythrocytemembrane, which bear the antigenic determinants for the MN, Ss, andGerbic blood groups, respectively. Glycophorins span the membraneonce and present their amino-terminal end to the extracellular surface of the human erythrocyte. Glycophorin A + B antibody recognizes Nterminal,homologous portion of glycophorins A (GPA) and B (GPB),(strongly to GPA, and weakly to GPB). The antibody is useful in erythroid cell development studies, because HIR2 antigen is expressed on early erythroblasts, late erythroblasts, erythroblasts, mature erythrocytes and the cell of erythroid cell lines K562 and HEL, but not on all other cell(mature erythrocytes are characteristically CD235a positive and CD45 and CD71 negative). For research use only, not for use in diagnostic procedures.

Granulocyte

P



Bone marrow trephine stained with Anti-Granulocyte using AEC chromogen

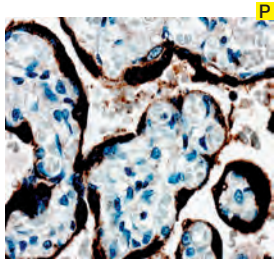
Clone:	BM-2
Isotype:	IgG1
Source:	Mouse
Immunogen:	Nuclei from pokeweed mitogen-stimulated human peripheral blood lymphocytes
Specificity:	Granulocytes
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM210-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM210-10M**
Xmatrx®	**AX210-YCD, AX210-50D**
Concentrated:	**MU210-UC, MU210-5UC**
Recommended Positive Control:	**FG-210M**
Recommended Barrier Control:	**FB-210M**

The BM-2 antibody can provide important differentiation information and may be used along with antibodies BM-1 and BM-3 to stain early precursor and mature forms of human myeloid cells. This group of monoclonal antibodies reacts with antigenic determinants present in normal myeloid cells and leukemias of similar derivation. BM-2 recognizes an antigen present in the cytoplasm of mature granulocytes. This antibody stains the cytoplasm of human granulocytes (polymorphonuclear leukocytes) residing in lymphoid and non-lymphoid tissue.

Growth Hormone (hGH)

P



Placenta stained with anti-HGH antibody using DAB chromogen

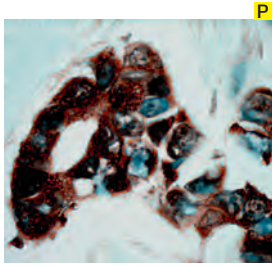
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	HGH
Specificity:	HGH
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR707-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR707-10R**
Xmatrx® :	**AW707-YCD, AW707-50D**
Concentrated:	**PU707-UP, PU707-5UP**
Recommended Positive Control:	**FG-707P**
Recommended Barrier Control:	**FB-707P**

Growth Hormone (GH, somatotropin) is the primary hormone responsible for regulating overall body growth and is also important in organic metabolism. It is synthesized by acidophilic or somatotropic cells of the anterior pituitary gland. Human GH has a molecular weight of 22 kD. GH stimulates growth indirectly by promoting the liver's production of somatomedins, which act directly on bone and soft tissue to cause growth. GH exerts direct metabolic effects on the liver, adipose tissue and muscle. In general, growth hormone enhances protein synthesis, conserves carbohydrates and uses up fat stores.

Heat Shock Protein (HSP-70)

P



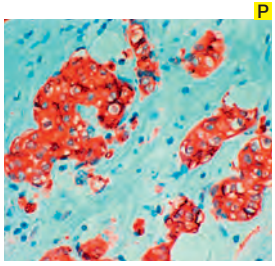
Breast carcinoma stained with Anti-HSP 70 using DAB chromogen

Clone:	BRM-22
Isotype:	IgG1
Source:	Mouse
Immunogen:	Bovine brain HSP70
Specificity:	Heat Shock Protein70 (HSP-70)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM289-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM289-10M**
Xmatrx®	**AX289-YCD, AX289-50D**
Concentrated:	**MU289-UC, MU289-5UC**
Recommended Positive Control:	**FG-289M**
Recommended Barrier Control:	**FB-289M**

HSP-70 is a member of a multigene family encoding several closely related 70-73 kD stress proteins (the HSP-70 family). These genes differ in their intracellular location and regulation and are thought to be involved in protein-protein interactions such as those of the protein products of the p53 tumor suppressor gene and the human c-myc oncogene. This antibody stains HSP-70 localized in the cytoplasm and/or nuclei in tissue from breast carcinoma, brain tumors, Alzheimer's disease and alcoholic liver disease.

Heat Shock Protein 27 (HSP 27)



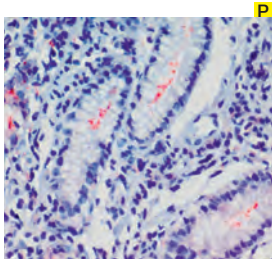
Breast carcinoma stained with Anti-HSP27 using AEC chromogen

Clone:	G3.1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Balb/c mice were immunized with "24K" protein isolated from the cytosol of MCF-7 cells. Spleen cells from immunized mice were fused with NS-1 myeloma cells
Specificity:	hsp27
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM171-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM171-10M**
Xmatrx®	**AX171-YCD, AX171-50D**
Concentrated:	**MU171-UC, MU171-5UC**
Recommended Positive Control:	**FG-171M**
Recommended Barrier Control:	**FB-171M**

HSP27 also known as the 24K estrogen-regulated protein or HSP28, is a small heat shock protein that has been shown to correlate with the expression of estrogen-receptors. Increased levels of HSP27 have been shown to correlate with the presence of ER and PR in human breast tumor biopsy samples. This antibody stains estrogen regulated heat shock protein (HSP27) in cytoplasm of cells in female reproductive tract.

Helicobacter pylori



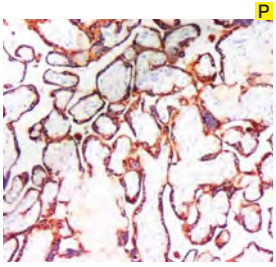
Infected mucosa stained with Anti-H. pylori using AEC chromogen

Clone:	ULC3R
Source:	Mouse
Immunogen:	Heat killed bacteria
Specificity:	*Helicobacter pylori*
Localization:	H. Pyloric
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM880-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM880-10ME**
Xmatrx®	**AX880-YCDE, AX880-50DE**
Concentrated:	**MU880-UC, MU880-5UC**
Recommended Positive Control:	**FG-880ME**
Recommended Barrier Control:	**FB-880ME**

This antibody stains the bacilli in lumen of infected stomach in formalin-fixed, paraffin-embedded tissue sections.

HCGα



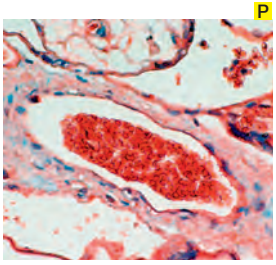
Placenta stained with HCGα

Clone:	HCGα/53
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant hCG alpha protein
Specificity:	HCGα
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM930-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM930-10ME**
Xmatrx®	**AX930-50DE, AX930-YCDE**
Concentrated:	**MU930-UCE, MU930-5UCE**
Recommended Positive Control:	**FG-930ME**
Recommended Barrier Control:	**FB-930ME**

Human chorionic gonadotropin (HCG) is a glycoprotein secreted in large quantities by normal trophoblasts. It is present only in trace amounts in non-pregnant urine and sera but rises sharply during pregnancy. HCG is composed of two non-identical, non-covalently linked polypeptide chains designated as the α and β subunits. The α subunit is identical to that of thyroid stimulating hormone (TSH), follicle stimulating hormone (FSH), and luteinizing hormone (LH). Anti-HCGα reacts with a protein of aproximately13 kDa identified as α sub-unit of HCG.

Hemoglobin A



Placenta tissue stained with Anti-Hb using AEC chromogen

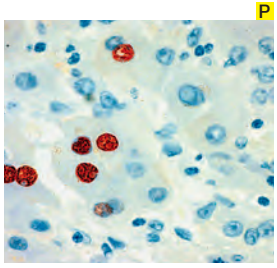
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Purified hemoglobin
Specificity:	Hemoglobin A
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR021-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR021-10R**
Xmatrx®	**AW021-YCD, AW021-50D**
Recommended Positive Control:	**FG-021P**
Recommended Barrier Control:	**FB-021P**

Immunohistochemical localization of hemoglobin is an excellent marker for the detection of immature, dysplastic, and megaloblastic erythroid cells particularly in myeloproliferative disorders such as erythroleukemia. Myeloid cells, lymphoid cells, plasma cells, histiocytes and megakaryocytes do not give positive staining for hemoglobin. Megaloblastic erythroid cells give strong staining for hemoglobin. This antibody stains human hemoglobin A predominantly in cytoplasm of erythroid cells.

Hepatitis B Virus Core Antigen (HBcAg)

P



Liver tissue stained with Anti-HBcAg using AEC chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	HBcAg purified from lysates of *E. coli* clones containing the viral core DNA
Specificity:	Hepatitis B core antigen
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

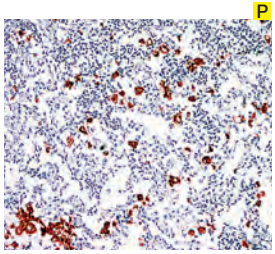
Ready-to-Use (Manual):	**AR082-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR082-10RE**
Xmatrx®	**AW082-YCDE,AW082-50DE**
Concentrated:	**PU082-UPE, PU082-5UPE**
Recommended Positive Control:	**FG-082PE**
Recommended Barrier Control:	**FB-082PE**

RUO

This antibody stains Hepatitis B Virus Core Antigen in nuclei of infected cells in tissue sections stained by immunohistochemical techniques.

Herpes Simplex Virus Type I (HSV I)

P



Infected lung tissue stained with Anti-HSV I using AEC chromogen

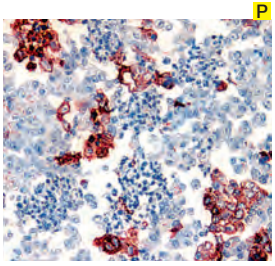
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Rabbit cornea cells infected with the MacIntyre strain of HSV type I and solubilized in detergent
Specificity:	Herpes Simplex Virus (HSV) type I
Localization:	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR084-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR084-10RE**
Xmatrx®	**AW084-YCDE, AW084-50DE**
Concentrated:	**PU084-UPE, PU084-5UPE**
Recommended Positive Control:	**FG-084PE**
Recommended Barrier Control:	**FB-084PE**

Human herpes simplex virus type I (HSV-I) is part of the herpesvirus family which also includes HSV-II, Epstein-Barr virus (mononucleosis), herpes zoster (chicken pox) and cytomegalovirus. They grow in the cell nuclei, bud through the nuclear membrane and cause latent infections. There is a significant degree of cross-reactivity between HSV-I and HSV-II. No cross-reactivity is seen with the Epstein-Barr virus, cytomegalovirus or herpes zoster virus.

Herpes Simplex Virus Type II (HSV II)

P



Cultured cells infected with HSV II, stained with Anti HSV II using DAB chromogen

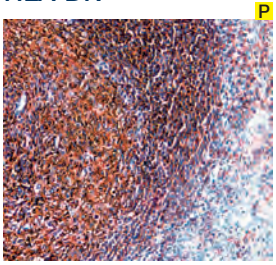
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	HSV type II (strain MS) infected whole rabbit cornea cells solubilized in detergent
Specificity:	Herpes simplex Virus (HSV) type II
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR085-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR085-10RE**
Xmatrx®	**AW085-YCDE, AW085-50DE**
Concentrated:	**PU085-UPE, PU085-5UPE**
Recommended Positive Control:	**FG-085PE**
Recommended Barrier Control:	**FB-085PE**

The antibody reacts with all the major glycoproteins present in the viral envelope and at least one core protein as determined by crossed immunoelectrophoresis. It does not cross react with cytomegalovirus and Epstein-Barr virus.

HLA-DR

P



Thyroid tissue stained with Anti-HLADR using DAB chromogen

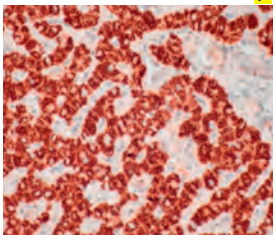
Clone:	LN3
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Activated human peripheral blood mononuclear cells
Specificity:	LN3
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM154-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM154-10ME**
Xmatrx®	**AX154-YCDE, AX154-50DE**
Concentrated:	**MU154-UCE, MU154-5UCE**
Recommended Positive Control:	**FG-154ME**
Recommended Barrier Control:	**FB-154ME**

RUO

HLA-DR is a transmembrane glycoprotein composed of an alpha chain (36 kD) and a beta chain (27 kD). LN3 is reactive with a non-polymorphic antigen of the HLA-DR (Ia) region, expressed primarily by antigen presenting cells, B-cells of the germinal centers and mantle zones, and additionally by monocytes, macrophages and interdigitating histiocytes. LN3 will produce medium intensity staining on B lymphocytes of germinal centers and mantle zones, and high intensity staining of interdigitating histiocytes in T-cell zones. This antibody stains the HLA-DR antigen in membrane of positive cells.

HSA



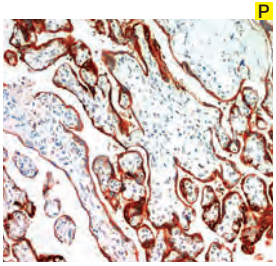
Liver tissue stained with Anti-HSA using DAB as a chromogen

Clone:	HSA/E8
Isotype:	IgG1/K
Source:	Mouse
Immunogen:	Human HSA
Specificity:	HSA
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM550-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM550-10M**
Xmatrx®	**AX550-YCD, AX550-50D**
Concentrated:	**MU550-UC, MU550-5UC**
Recommended Positive Control:	**FG-550M**
Recommended Barrier Control:	**FB-550M**

Hepatocyte Specific Antigen (HSA) has been demonstrated consistently in the vast majority of hepatocellular carcinomas. HSA recognizes both benign and malignant liver derived tissues including such tumors as hepatoblastoma, Hepatocellular carcinoma, and hepatic adenoma. It recognizes both normal adult and fetal liver tissue. This antibody is useful in differentiating hepatocellular carcinomas with adenoid features from adenocarcinomas, either primary in the liver or metastatic lesions to the liver. In recognizing hepatoblastoma, it is useful in differentiating this entity from other small round cell tumors.

Human Chorionic Gonadotropin (hCG) Beta



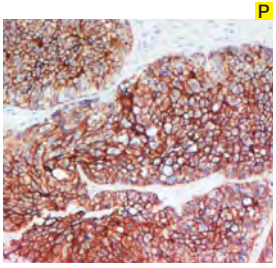
Placenta tissue stained with Anti-hCG beta using DAB chromogen

Clone:	M94138
Isotype:	IgG
Source:	Mouse
Immunogen:	Purified hCG Beta-subunit
Specificity:	Beta-hCG
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1 elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM395-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM395-10M**
Xmatrx®	**AX395-YCD, AX395-50D**
Concentrated:	**MU395-UC, MU395-5UC**
Recommended Positive Control:	**FG-395M**
Recommended Barrier Control:	**FB-395M**

Human Chorionic Gonadotropin (hCG) is a 40 kD glycoprotein secreted in large quantities by the placenta and normally circulates at readily detectable levels only during gestation. Immunohistochemical studies reveal localization of hCG in syncytiotrophoblasts. Isolated clusters of giant cells may be found in association with certain components of germ cell tumors but are most frequently associated with embryonic carcinoma, endodermal sinus tumor, and germinoma. This antibody stains the cytoplasm of positive cells.

N-cadherin



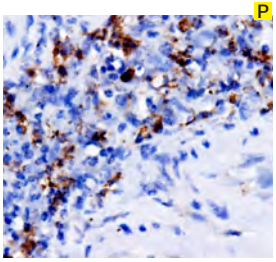
Renal cell carcinoma stained with N-cadherin

Clone:	5D5
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant fragment human CDH2 expressed in E.coli
Specificity:	N-cadherin
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM928-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM928-10M**
Xmatrx®	**AX928-50D, AX928-YCD**
Concentrated:	**MU928-UC, MU928-5UC**
Recommended Positive Control:	**FG-928M**
Recommended Barrier Control:	**FB-928M**

N-cadherin is a 140 kDa protein belonging to a family of transmembrane molecules that mediate calcium-dependent intercellular adhesion. Cadherins are involved in controlling morphogenetic movements during development and regulate cell surface adhesion through homotypic adhesion with the same cadherin species. N-cadherin's function is dependent on its association with the actin-cytoskeleton and is mediated through interactions between the C-terminal region of N-cadherin and the cytoplasmic catenin proteins. The stability of this association is regulated by phosphorylation and dephosphorylation of beta-catenin. N-cadherin acts as a regulator of neural stem cells quiescence by mediating anchorage of neural stem cells to ependymocytes in the adult subependymal zone. N-cadherin is required during gastrulation for the establishment of left-right asymmetry.

IDO



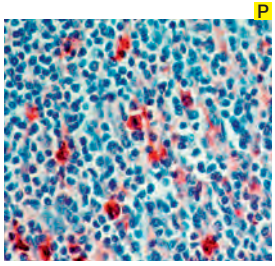
Spleen stained with Anti-IDO using DAB chromogen

Clone:	4D2
Isotype:	IgG
Source:	Mouse
Immunogen:	IDO (AAH27882, a.a. 1-404) full length recombinant protein with GST tag
Specificity:	Human IDO
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM916-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM916-10ME**
Xmatrx®	**AX916-YCDE, AX916-50DE**
Concentrated:	**MU916-UCE, MU916-5UCE MU916-1UCE**
Recommended Positive Control:	**FG-916M**
Recommended Barrier Control:	**FB-916M**

IDO or INDO (Indoleamine-pyrrole 2,3-dioxygenase) is a heme-containing intracellular enzyme that in humans is encoded by the IDO1 gene. IDO is the first and rate-limiting enzyme of tryptophan catabolism through kynurenine pathway, thus causing depletion of tryptophan which can cause halted growth of microbes as well as T cells. It has been shown that IDO permits tumor cells to escape the immune system by depletion of L-Trp in the microenvironment of cells. A wide range of human cancers such as prostatic, colorectal, pancreatic, cervical, gastric, ovarian, head, and lung. over express human IDO and inhibition of the IDO pathway is emerging as an important modality for the treatment of cancer.

IgA



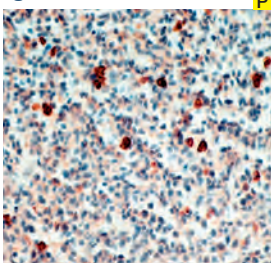
Tonsil tissue stained with anti-IgA using AEC chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	IgA isolated from human serum
Specificity:	IgA
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR045-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR045-10R**
Xmatrx®	**AW045-YCD, AW045-50D**
Concentrated:	**PU045-UP, PU045-5UP**
Recommended Positive Control:	**FG-045P**
Recommended Barrier Control:	**FB-045P**

IgA is the predominant antibody isotype in mucosal areas. This antibody reacts with IgA but not with other isotypes. It is useful in the evaluation of leukemias, plasmacytomas, certain non-Hodgkin's lymphomas, and glomerulonephritis.

IgD



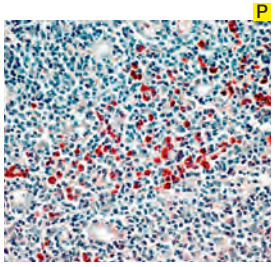
Tonsil stained with Anti-IgD using AEC chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	IgD isolated from a pool of normal human sera
Specificity:	Human IgD
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR440-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR440-10R**
Xmatrx®	**AW440-YCD, AW440-50D**
Concentrated:	**PU440-UP, PU440-5UP**
Recommended Positive Control:	**FG-440P**
Recommended Barrier Control:	**FB-440P**

IgD is expressed on mature B cells and may be used to classify B cell neoplasms. Mantle zone B-cells in primary follicles and those outlining the germinal centers of secondary follicles are seen to be positive for IgD expression. Thus, this antibody could be used to detect changes in nodal architecture. It also may be used to detect the expanded follicular structures of progressive transformation of germinal center (PTGC), which are composed largely of IgD+ mantle zone B-cells. It is used along with IgM as a marker to identify marginal zone lymphomas.

IgG



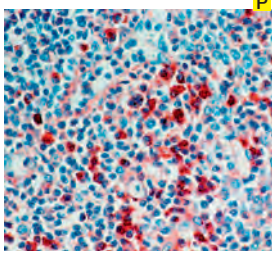
Tonsil stained with Anti-IgG using AEC chromogen

Clone:	IgG88
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Purified human immunoglobulin
Specificity:	IgG
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM367-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM367-10M**
Xmatrx®	**AX367-YCD, AX367-50D**
Concentrated:	**MU367-UC, MU367-5UC**
Recommended Positive Control:	**FG-367M**
Recommended Barrier Control:	**FB-367M**

The molecular weight of IgG is 150 kD consisting of two gamma heavy chains and two kappa or lambda light chains. Immunohistochemical techniques to identify immunoglobulins have been used in the classification of leukemias, plasmacytomas and certain non-Hodgkin's lymphomas. In addition, immunoglobulin immunohistochemistry has been widely used in nephropathology and dermatopathology for studying a variety of immune diseases.

IgG



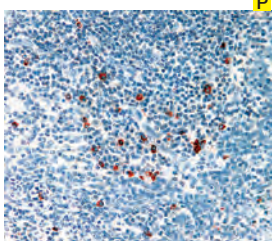
Tonsil tissue stained with Anti-IgG using AEC chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	IgG isolated from human serum
Specificity:	IgG
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AR050-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR050-10R**
Xmatrx®	**AW050-YCD, AW050-50D**
Concentrated:	**PU050-UP, PU050-5UP**
Recommended Positive Control:	**FG-050P**
Recommended Barrier Control:	**FB-050P**

The human B-lymphocyte is characterized by the presence of readily detectable surface immunoglobulins. Up to 10 percent of peripheral blood lymphocytes and 68-70 percent of the lymphocytes in lymph nodes are of the B-cell type. The patterns of reactivity to IgG, IgA, IgM, C3, kappa, and lambda light chains can be used for the characterization of certain kinds of kidney and skin diseases. This antibody stains human IgG in the cytoplasm and membrane of B-cells and is negative for light chains and other heavy chains.

IgM



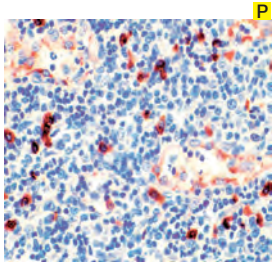
Tonsil stained with Anti-IgM using DAB chromogen

Clone:	IgM88
Isotype:	IgG 2b Kappa
Source:	Mouse
Immunogen:	Purified human IgM
Specificity:	IgM
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM366-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM366-10M**
Xmatrx®	**AX366-YCD, AX366-50D**
Concentrated:	**MU366-UC, MU366-5UC**
Recommended Positive Control:	**FG-366M**
Recommended Barrier Control:	**FB-366M**

This monoclonal antibody reacts with human IgM heavy (mu) chain Fc region of 900kD pentameric IgM. It does not react with IgA, IgG or with light chains. This antibody stains plasma cells containing IgM, but does not usually stain immune complexes and surface IgM. It is useful for the evaluation of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas, the majority of which derive from B-cell lineage. The common underlying feature of these malignancies is the restricted expression of heavy and light chains to a single heavy and light chain type.

IgM



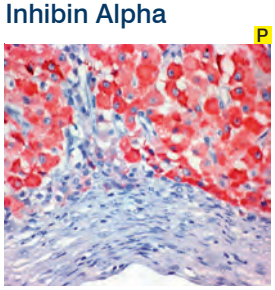
IgM expression in tonsil stained using DAB chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	IgM isolated from human plasma
Specificity:	IgM antigen
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR427-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR427-10R**
Xmatrx®	**AW427-YCD, AW427-50D**
Concentrated:	**PU427-UP, PU427-5UP**
Recommended Positive Control:	**FG-427P**
Recommended Barrier Control:	**FB-427P**

This polyclonal antibody reacts with mu-chains of human IgM. All B-cells have IgD and IgM expressed predominantly on the surface and presumably act as antigen receptors. Surface IgM is present on mantle zone and marginal zone B-cells. Immature B-cells in bone marrow express IgM and mature B-cells migrating to periphery secrete IgD and IgM. The demonstration of both IgM and IgD can be useful in determining if a B-cell lymphoma is derived from mantle or marginal zone.

Inhibin Alpha



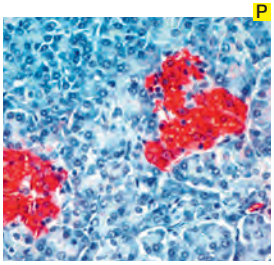
Ovary tissue stained with Anti-Inhibin Alpha using DAB chromogen

Clone:	R1
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Synthetic peptide from 1-32 peptide of the alpha subunit of human Inhibin alpha
Specificity:	Inhibin Alpha
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM446-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM446-10M**
Xmatrx®	**AX446-YCD, AX446-50D**
Concentrated:	**MU446-UC, MU446-5UC**
Recommended Positive Control:	**FG-446M**
Recommended Barrier Control:	**FB-446M**

Inhibins are dimeric gonadal protein hormones that negatively regulate pituitary FSH synthesis and secretion. Inhibin contains an alpha and beta subunit linked by disulfide bonds. Two forms of inhibin differ in their beta subunits (A or B), while their alpha subunits are identical. Inhibin B is comprised of the Inhibin alpha subunit disulfide linked to the Inhibin beta subunit. Initial studies indicated that Inhibin is a critical negative regulator of gonadal stromal cell proliferation and was the first secreted protein identified to have tumor-suppressor activity. Inhibin alpha-subunit immunoreactivity has been detected in Sertoli cells, spermatocytes, and in some Leydig cells.

Insulin



Pancreas tissue stained with Anti-Insulin using AEC chromogen

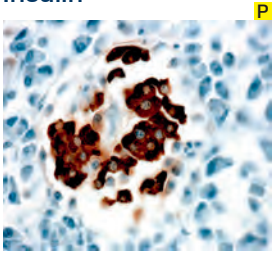
Clone:	HB125
Isotype:	IgG 1, Kappa
Source:	Mouse
Immunogen:	Purified human insulin
Specificity:	Insulin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM029-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM029-10M**
Xmatrx®	**AX029-YCD, AX029-50D**
Concentrated:	**MU029-UC, MU029-5UC**
Recommended Positive Control:	**FG-029M**
Recommended Barrier Control:	**FB-029M**

Lack of this hormone gives rise to diabetes mellitus. The development of specific antibodies to various polypeptide hormones have made IHC localization of these hormones such as Insulin (which is produced in the pancreas by beta cells of Islet of Langerhans) the most sensitive and reliable means available for an accurate characterization of the function of islet cell tumors. This antibody recognizes the A chain loop of human Insulin. Cross-reactivity with bovine, rat and mouse Insulin has been observed. This antibody stains insulin in the cytoplasm of beta cells in the pancreas.

Insulin

P



Insulin Pancreas stained with anti-Insulin using DAB chromogen

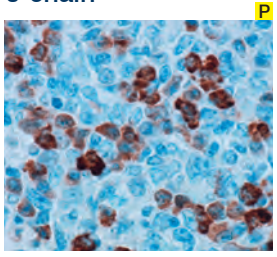
Clone:	EP125
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human Insulin protein
Specificity:	Human Insulin protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN735-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN735-10M**
Xmatrx®	**AY735-YCD, AY735-50D**
Concentrated:	**NU735-UC, NU735-5UC**
Recommended Positive Control:	**FG-735N**
Recommended Barrier Control:	**FB-735N**

Insulin is a hormone that regulates glucose homeostasis. It is synthesized in the pancreas within the β-cells of the islets of Langerhans. One million to three million islets of Langerhans (pancreatic islets) form the endocrine part of the pancreas, which is primarily an exocrine gland. The endocrine portion accounts for only 2% of the total mass of the pancreas. Within the islets of Langerhans, beta cells constitute 65–80% of all the cells. The antibody labels both normal and neoplastic insulin-producing cells. It is useful in identifying insulinoma.

J-chain

P



Tonsil stained with anti-Human J-chain using DAB chromogen

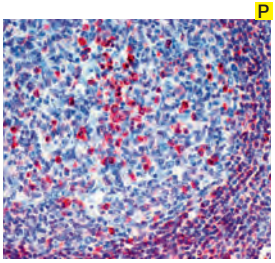
Clone:	SP105
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide near the internal region of human J-chain
Specificity:	Human J-chain
Localization:	perinuclear spaces and endoplasmic reticulum of the lymphocytes
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN756-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN756-10M**
Xmatrx®	**AY756-YCD, AY756-50D**
Concentrated:	**NU756-UC, NU756-5UC**
Recommended Positive Control:	**FG-756N**
Recommended Barrier Control:	**FB-756N**

J chain is a small glycopeptide and is structurally unrelated to heavy or light chains, but is synthesized by all plasma cells that secrete polymeric immunoglobulins. J chains are present in a large proportion of the immunoglobulin-positive cells in the germinal centres of the tonsils and lymph nodes. B cells secrete J chain at an early stage of differentiation with the expression persisting in those cells destined to produce IgA or IgM. J chain has been proposed to play a role in the mucosal transport of polymeric Igs by the polymeric Ig receptor. The studies show that a significant proportion of deposited mesangial immunoglobulin in IgA nephropathy is dimeric, or J chain positive. This monoclonal antibody stains J chain in cytoplasm of positve cells. B cells secrete J chain at an early stage of differentiation with the expression persisting in those cells destined to produce IgA or IgM.

J Chain

P



Tonsil stained with Anti-J-chain using Fast Red chromogen

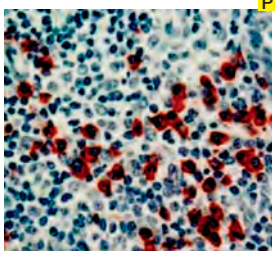
Clone:	JC88
Isotype:	IgG 1 Kappa
Source:	Mouse
Immunogen:	Human J chain
Specificity:	J chain
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx	HX032-YCD

Ready-to-Use (Manual):	**AM374-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM374-10M**
Xmatrx®	**AX374-YCD, AX374-50D**
Concentrated:	**MU374-UC, MU374-5UC**
Recommended Positive Control:	**FG-374M**
Recommended Barrier Control:	**FB-374M**

J chain is a small, glycopeptide of 15 kD. It is structurally unrelated to heavy or light chains, but is synthesized by all plasma cells that secrete polymeric immunoglobulins. J chains are present in a large proportion of the immunoglobulin-positive cells in the germinal centers of the tonsils and lymph nodes. B cells secrete J chain at an early stage of differentiation with the expression persisting in those cells destined to produce IgA or IgM.

Kappa Light Chain

P



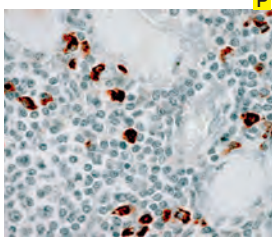
Tonsil stained with Anti-Kappa Light Chain using AEC chromogen

Clone:	L1C1
Isotype:	IgG1
Source:	Mouse
Immunogen:	B-lymphoma cells
Specificity:	Kappa light chain
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM048-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM048-10M**
Xmatrx®	**AX048-YCD, AX048-50D**
Concentrated:	**MU048-UC, MU048-5UC**
Recommended Positive Control:	**FG-048M**
Recommended Barrier Control:	**FB-048M**

The light chains of immunoglobulin molecules have two antigenic types: kappa and lambda. A given immunoglobulin molecule contains two light chains, either both kappa or both lambda. As a result the clonal nature of any immunoglobulin-producing cell population can be determined by its light chain structure. The most important use of this technique would be in distinguishing atypical reactive follicular lymphoid hyperplasia from follicular lymphoma, undifferentiated carcinoma from large cell lymphoma, pseudolymphoma from lymphoma, and reactive plasmacytosis from well differentiated plasmacytoma.

Kappa Light Chain



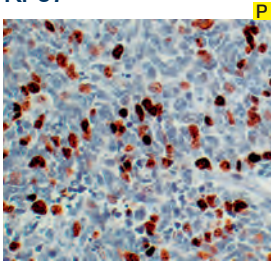
Plasma cell in the tonsil showing Kappa light chain positivity stained using DAB chromogen

Clone:	K88
Isotype:	IgG1, Kappa
Source:	Mouse
Immunogen:	Human kappa protein
Specificity:	Kappa light chain
Localization:	Cytoplasm
Pre-treatment:	EZ-AR 1
Manual/i6000:	None
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM369-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM369-10M**
Xmatrx®	**AX369-YCD, AX369-50D**
Concentrated:	**MU369-UC, MU369-5UC**
Recommended Positive Control:	**FG-369M**
Recommended Barrier Control:	**FB-369M**

This antibody reacts specifically with the kappa light chain of human immunoglobulin and not lambda light chain and is reactive with intact IgG (kappa), IgM (kappa), free kappa light chains, and Bence-Jones kappa light chains. The most important use of this antibody would be in distinguishing atypical reactive follicular lymphoid hyperplasia from follicular lymphoma, undifferentiated carcinoma from large cell lymphoma, pseudolymphoma from lymphoma, and reactive plasmacytosis from well differentiated plasmacytoma.

Ki-67



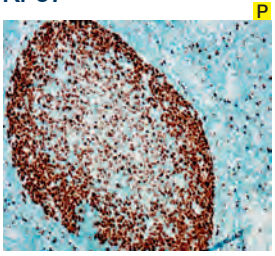
Medulloblastoma stained with Anti-Ki-67 using DAB chromogen

Clone:	K-2
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Recombinant Ki-67 protein fragment close to C-terminus
Specificity:	Ki-67 antigen
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM410-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM410-10M**
Xmatrx®	**AX410-YCD, AX410-50D**
Concentrated:	**MU410-UC, MU410-5UC**
Recommended Positive Control:	**FG-410M**
Recommended Barrier Control:	**FB-410M**

Ki-67 reacts with a human nuclear antigen that is expressed in proliferating cells but not in resting cells. Ki-67 antigen is a potent tool for rapidly evaluating the growth fraction of any given human cell subset. It is particularly useful in studying malignant tumors and other pathogenic states as a measure of the proportion of proliferating cells. Immunostaining of Ki-67 antigen in normal tissue shows nuclear reactivity in cells of germinal centers of cortical follicles, cortical thymocytes, neck cells of gastrointestinal mucosa, and undifferentiated spermatogonia.

Ki-67



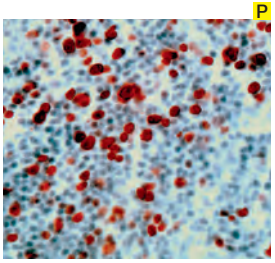
Tonsil stained with anti-ki67 antibody using DAB chromogen

Clone:	EP5
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human Ki-67 protein
Specificity:	Ki-67
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN727-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN727-10M**
Xmatrx®	**AY727-YCD, AY727-50D**
Concentrated:	**NU727-UC, NU727-5UC**
Recommended Positive Control:	**FG-727N**
Recommended Barrier Control:	**FB-727N**

Ki-67 antigen is a nuclear antigen specifically associated with cell proliferation. Ki-67 is expressed in all proliferating cells which are in the active phases of the cell cycle (late G1, S, G2, and mitosis), but is absent from resting cells (G0). It is strictly associated with cell proliferation. Ki-67 labeling index has been shown to be elevated in early stage and further increased in advanced stage of various types of cancer including breast cancer, colon cancer, prostate cancer and brain cancer.

Ki-67 Antigen, Proliferating Cell



Tonsil stained with Anti-KI67 using AEC chromogen

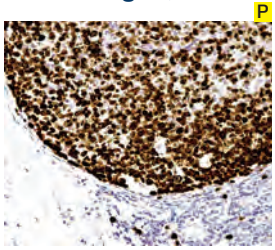
Clone:	MIB-1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Peptide fragment of Ki-67 antigen
Specificity:	Ki-67 antigen
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM297-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM297-10M**
Xmatrx®	**AX297-YCD, AX297-50D**
Concentrated:	**MU297-UC, MU297-5UC**
Recommended Positive Control:	**FG-297M**
Recommended Barrier Control:	**FB-297M**

Ki-67 is one of the most widely studied proliferating cell antigens. The expression of Ki-67 antigen is limited to cells in phase G1, S and G2 with the highest levels present in the M phase. Ki-67 is more likely to be expressed in aneuploid tumors compared to diploid tumors, and it is associated with a high mitotic count and high histology grade.This monoclonal antibody enables detection of Ki-67 in proliferating cell populations in routine paraffin sections. The antibody stains positive in the nucleus of proliferation cells.

Ki-67 Antigen, Proliferating Cell

P



Lymph node germinal cells stained with Anti-Ki-67 using DAB chromogen

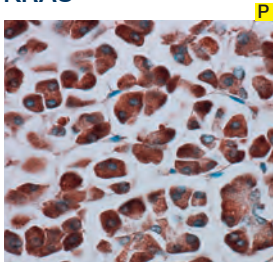
Clone:	Ki88
Isotype:	IgG1, Kappa
Source:	Mouse
Immunogen:	Recombinant human Ki-67 protein
Specificity:	Ki-67 antigen
Localization:	Nucleus
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000	HK546-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM370-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM370-10M**
Xmatrx®	**AX370-YCD, AX370-50D**
Concentrated:	**MU370-UC, MU370-5UC**
Recommended Positive Control:	**FG-370M**
Recommended Barrier Control:	**FB-370M**

The monoclonal antibody Ki88 reacts with a human nuclear antigen expressed in proliferating cells but absent in resting cells. Immunostaining of the Ki-67 antigen in normal tissue shows nuclear reactivity in cells of germinal centers of cortical follicles, cortical thymocytes, neck cells of gastrointestinal mucosa, and undifferentiated spermatogonia. Resting cells such as lymphocytes, monocytes, parietal cells and Paneth's cells of gastrointestinal mucosa, hepatocytes, renal cells, and mature sperm cells do not stain. This antibody stains a human nuclear antigen expressed in all proliferating cells.

KRAS

P



Pancreas stained with anti-Human KRASusing DAB chromogen

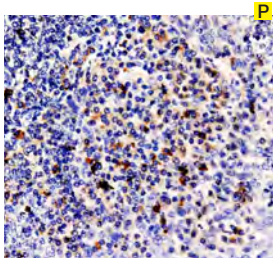
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to a sequence at the C-terminal of human KRAS
Specificity:	Human KRAS
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR751-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR751-10R**
Xmatrx®	**AW751-YCD, AW751-50D**
Concentrated:	**PU751-UP, PU751-5UP**
Recommended Barrier Control:	**FG-751P**
Recommended Barrier Control:	**FB-751P**

KRAS is a member of the small GTPase superfamily. A single aminoacid substitution is responsible for an activating mutation. The transforming protein that results is implicated in various malignancies,including lung adenocarcinoma, mucinous adenoma, ductal carcinoma of the pancreas and colorectal carcinoma.

LAG3

P



Tonsil stained with Anti-LAG3 using DAB chromogen

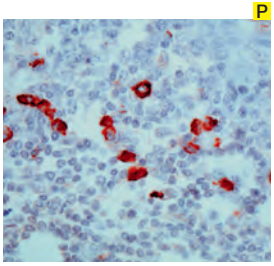
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	Lymphocyte activation gene 3 protein precursor recombinant protein epitope signature tag (PrEST)
Specificity:	Human LAG3
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR917-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR917-10RE**
Xmatrx®	**AW917-YCDE, AW917-50DE**
Concentrated:	**PU917-UP,E PU917-5UPE PU917-1UPE**
Recommended Positive Control:	**FG-917PE**
Recommended Barrier Control:	**FB-917PE**

LAG-3 (Lymphocyte Activation Gene 3) or CD223 belongs to the Ig superfamily and has high homology to CD4. LAG-3 is an inhibitory T-cell surface molecule that has been found to directly modulate T-cell homeostasis. LAG3 is expressed on populations of activated T cells, such as Tregs and natural killer (NK) cells, and some monocyte-derived cell populations. LAG3 negatively regulates cellular proliferation, activation, and homeostasis of T cells, and has been reported to play a role in Treg suppressive function. LAG3 is often co-expressed with PD-1 on the surface of tumor infiltrating lymphocytes, where the two proteins act independently to synergistically promote tumoral immune escape.

Lambda Light Chain

P



Tonsil stained with Anti-lambda light chain using DAB chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Pool of human lambda Bence Jones proteins
Specificity:	Lambda light chains
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR049-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR049-10R**
Xmatrx®	**AW049-YCD, AW049-50D**
Concentrated:	**PU049-UP, PU049-5UP**
Recommended Positive Control:	**FG-049P**
Recommended Barrier Control:	**FB-049P**

The light chains of immunoglobulin molecules may be either Kappa or Lambda. Antibodies to kappa and lambda light chains are used for the evaluation of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas, the majority of which are derived from B-cell lineage. The most important uses of this technique would be in distinguishing atypical reactive follicular lymphoid hyperplasia from follicular lymphoma, undifferentiated carcinoma from large cell lymphoma, pseudolymphoma from lymphoma, and reactive plasmacytosis from well differentiated plasmacytoma.

Lambda Light Chain

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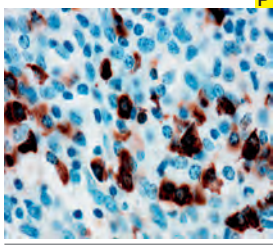


Tonsil stained with anti-Lambda using DAB chromogen

Clone:	EP172
Isotype:	IgG
Source:	Rabbit
Immunogen:	A recombinant protein fragment corresponding to human IgA protein
Specificity:	Human IgA protein
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

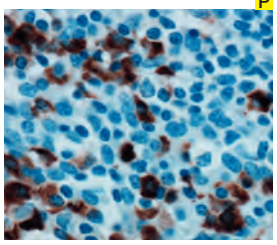
Ready-to-Use (Manual):	**AN715-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN715-10M**
Xmatrx®	**AY715-YCD, AY715-50D**
Concentrated:	**NU715-UC, NU715-5UC**
Recommended Positive Control:	**FG-715N**
Recommended Barrier Control:	**FB-715N**

The basic structure of an immunoglobulin molecule consists of two identical heavy chains, either γ, μ, α, δ or ε and two identical light chains, either kappa or lambda.

The gene rearrangement process that generates the immunoglobulin molecule results in either a productive kappa or lambda gene. The ratio of kappa and lambda light chains varies between Ig classes and subclasses. The lambda light chain antibody labels the lambda light chain that expresses normal and neoplastic B lymphocytes and plasma cells. Other cells may also express lambda light chain due to nonspecific uptake of immunoglobulin. The occurrence of a mixture of kappa and lambda chain expressing cells suggests a polyclonal population and a reactive or non-neoplastic proliferation of B cells.

Lambda Light Chain

P



Tonsil stained with anti-Human Lambda Light Chain using DAB chromogen

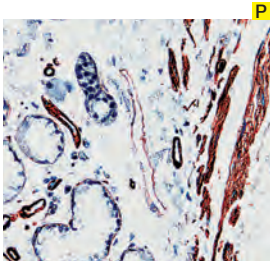
Clone:	SP147
Isotype:	IgG
Source:	Rabbit
Immunogen:	Recognizes the lambda immunoglobulin light chain, which comprises approximately 40% of light chain in the human
Specificity:	Human Lambda Light Chain
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN763-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN763-10M**
Xmatrx®	**AY763-YCD, AY763-50D**
Concentrated:	**NU763-UC, NU763-5UC**
Recommended Positive Control:	**FG-763N**
Recommended Barrier Control:	**FB-763N**

The basic structure of an immunoglobulin molecule consists of two identical heavy chains, either γ, μ, α, δ or ε and two identical light chains,either kappa or lambda.The gene rearrangement process that generates the immuno globulin molecule results in either a productive kappa or lambda gene. The ratio of kappa and lambda light chains varies between Ig classes and subclasses.The lambda light chain antibody labels the lambda light chain that expresses normal and neoplastic B lymphocytes and plasma cells. Other cells may also express lambda light chain due to nonspecific uptake of immunoglobulin.The occurrence of a mixture of kappa and lambda chain expressing cells suggests a polyclonal population and a reactive or non-neoplastic proliferation of B cells.

Laminin

P



Lung stained with Anti-laminin using DAB chromogen

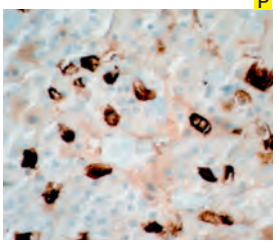
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Laminin isolated from EHS-mouse sarcoma
Specificity:	Laminin
Localization:	Basement Membrane
Pre-treatment:	EZ-AR1 elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AR078-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR078-10R**
Xmatrx®	**AW078-YCD, AW078-50D**
Concentrated:	**PU078-UP, PU078-5UP**
Recommended Positive Control:	**FG-078P**
Recommended Barrier Control:	**FB-078P**

The antibody to laminin selectively and specifically recognizes basement membrane components. Laminin consists of a 220 kD subunit, which is disulfide-linked into larger complexes or even into the structural scaffolding of the basement membrane itself. In surgical pathology, laminin can be used as a marker to demonstrate morphologic change of basement membrane, which is helpful for interpreting the invasion of malignant tumors. Laminin could also be used to study histogenesis and pathogenesis of certain unknown lesions such as extracellular and intracellular hyaline bodies occurring in various diseases. This antibody stains Laminin in basement membranes.

Luteinizing Hormone

P



Pituitary stained with anti-Human Luteinizing Hormone using DAB chromogen

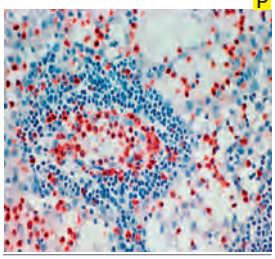
Clone:	SP132
Isotype:	IgG
Source:	Rabbit
Immunogen:	Recombinant human LH protein
Specificity:	Human Luteinizing Hormone
Localization:	Cytoplasm, surface and Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN787-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN787-10M**
Xmatrx®	**AY787-YCD, AY787-50D**
Concentrated:	**NU787-UC, NU787-5UC**
Recommended Positive Control:	**FG-787N**
Recommended Barrier Control:	**FB-787N**

Luteinizing hormone (LH, also known as lutropin) is a tropic hormone which modulates the secretory activity of other endocrine glands. LH functions to stimulate ovulation, corpus luteum formation, estrogen and progesterone synthesis by the ovary and androgen synthesis by the interstitial cells of the testes. It is produced in the anterior hypophysis of the pituitary gland. The glycoprotein hormone, LH, like follicle stimulating hormone and thyroid stimulating hormone, is composed of a common alpha-subunit but also a specific beta-subunit, which characterizes each of these hormones.

Lysozyme

P



Lymph Node stained with anti-lysozyme using AEC chromogen

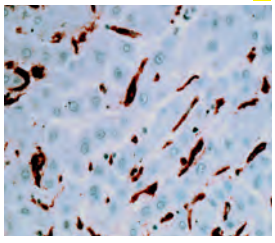
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Lysozyme isolated from the urine of monocytic leukemia patients
Specificity:	Lysozyme
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR024-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR024-10R**
Xmatrx®	**AW024-YCD, AW024-50D**
Concentrated:	**PU024-UP, PU024-5UP**
Recommended Positive Control:	**FG-024P**
Recommended Barrier Control:	**FB-024P**

Lysozyme (also called muramidase) is an enzyme which acts on bacterial cell walls by cleaving N-acetyl-glucosaminyl-N-acetylmuramic acid linkages. Lysozyme is present in human milk, tears, saliva, and serum. It is also found in myeloid cells, monocytes and histiocytes, making it useful for the demonstration of the myeloid or monocytic nature of acute leukemia. This antibody stains the cytoplasm of granulocytes and monocytes/macrophages.

Macrophage

P



Kupffer cells stained with anti-Macrophage using DAB chromogen

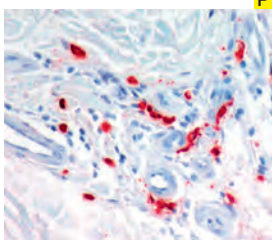
Clone:	LN5
Isotype:	IgM
Source:	Mouse
Immunogen:	Human peripheral blood cells
Specificity:	Macrophages
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM165-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM165-10M**
Xmatrx®	**AX165-YCD, AX165-50D**
Concentrated:	**MU165-UC, MU165-5UC**
Recommended Positive Control:	**FG-165M**
Recommended Barrier Control:	**FB-165M**

LN5 stains an unidentified antigen in cytoplasm of macrophages and histiocytes in hematopoietic organs. It stains mantle zone B lymphocytes of the lymph node and spleen, spermatogonia, chief cells of the stomach, ductal epithelium of breast and tubular epithelium of kidney. It is strongly reactive with cases of true histiocytic lymphoma but is negative, except for macrophages, in Hodgkins disease and non-Hodgkins lymphomas. It can be an important tool for the study of malignant and benign histiocytic lesions. This antibody stains the cytoplasm of a specific population of human macrophage and histiocytes.

Mast Cell Tryptase

P



Mast cell in the dermis highlighted by Mast Cell Tryptase antibody using AEC chromogen

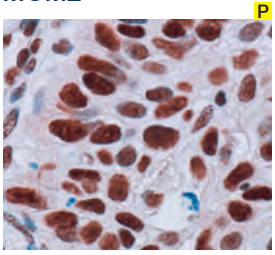
Clone:	AA1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human Mast Cell Tryptase purified from human lung tissue
Specificity:	Mast Cell Tryptase antigen
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM419-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM419-10M**
Xmatrx®	**AX419-YCD, AX419-50D**
Concentrated:	**MU419-UC, MU419-5UC**
Recommended Positive Control:	**FG-419M**
Recommended Barrier Control:	**FB-419M**

The monoclonal antibody produced by clone AA1 reacts with human Mast Cell Tryptase in different tissues. Relatively high levels of the enzyme are found in mast cells of skin and lung. Tryptase, a structurally unique trypsin like serine protease, is a biochemical marker that has proven useful for disorders that involve systemic mast cell activation. It is shown to be implicated as a potential mediator in the pathology of several mast cell related allergic and inflammatory conditions, including rhinitis, conjunctivitis, and most notably asthma. This antibody stains Mast Cell Tryptase antigen in cytoplasm of mast cells in skin, lung and tonsil tissues.

MCM2

P



Cervical cancer tissue stained with anti-Human MCM2using DAB chromogen

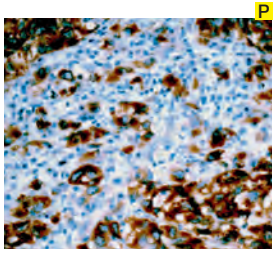
Clone:	SP85
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from internal region of human MCM2 protein.
Specificity:	Human MCM2
Localization:	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN773-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN773-10M**
Xmatrx®	**AY773-YCD, AY773-50D**
Concentrated:	**NU773-UC, NU773-5UC**
Recommended Positive Control:	**FG-773N**
Recommended Barrier Control:	**FB-773N**

The protein encoded by this gene is one of the highly conserved minichromosome maintenance proteins (MCM). MCM2 (Minichromosome maintenance protein 2) is involved in the initiation of eukaryotic genome replication. MCM2 (also called CDCL1, mitotin and BM28), is a human nuclear protein that is crucial in the cell cycle, being involved in the onset of DNA replication and cell division. It is similar to members of the family of early S-phase proteins. Mincheva et al. (1994) mapped the gene to 3q21. From its localization, CDCL1 became a candidate for an oncogene affected by chromosomal breaks in acute myeloid leukemia (AML).

Melan-A (MART-1)

P



Melanoma stained with Anti-Melan-A using DAB chromogen

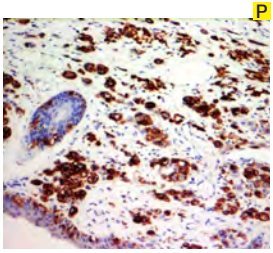
Clone:	A103
Isotype:	IgG
Source:	Mouse
Immunogen:	Recombinant Melan-A protein
Specificity:	Melan-A or MART-1
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM361-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM361-10M**
Xmatrx®	**AX361-YCD, AX361-50D**
Concentrated:	**MU361-UC, MU361-5UC**
Recommended Barrier Control:	**FB-361M**
Recommended Positive Control:	**FG-361M**

Melan-A, a product of the MART-1 gene, is a differentiation antigen which is expressed in 100% of melanocytes, most melanomas, and 50-60% of melanoma cell lines. It is one of the melanoma antigens recognized by autologous cytotoxic T cells, and as an antigenic target for tumor infiltrating lymphocytes. This antibody also stains Melan-A in normal melanocytes and in the retina. It does not stain normal or tumor tissues from non-melanocyte lineages. This antibody stains positive in cytoplasm of melanocytes and other positive cells.

Melanoma

P



Melanoma tumor cells positive for melanoma antigen stained using AEC chromogen

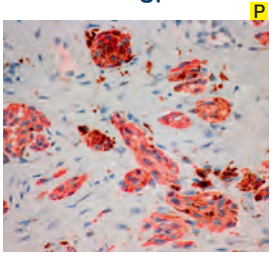
Clone:	HMB45
Isotype:	IgG1
Source:	Mouse
Immunogen:	Metastatic malignant melanoma cells
Specificity:	Malignant melanoma
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM001-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM001-10M**
Xmatrx®	**AX001-YCD, AX001-50D**
Concentrated:	**MU001A-UC, MU001A-5UC**
Recommended Positive Control:	**FG-001M**
Recommended Barrier Control:	**FB-001M**

Metastatic melanoma is often confused with a variety of poorly differentiated carcinomas, sarcomas, and large cell lymphomas. Clone HMB45 reacts with fetal and neonatal melanocytes but not with normal adult melanocytes and junctional nevus cells but not with intradermal nevi, hence showing specificity for detection of melanocytic tumors. The panel of tumor markers, most commonly used in conjunction with HMB45, for evaluation of melanoma includes S-100 protein LCA, CEA, and EMA, as well as vimentin, an intermediate filament found in both melanomas and sarcomas.

Melanoma gp100

P



Melanoma tissue stained with Anti-Melanoma gp100 using AEC chromogen

Clone:	gp100/D5
Isotype:	IgG1/K
Source:	Mouse
Immunogen:	Human melanoma gp100
Specificity:	Melanoma gp100
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM536-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM536-10M**
Xmatrx®	**AX536-YCD, AX536-50D**
Concentrated:	**MU536-UC, MU536-5UC**
Recommended Positive Control:	**FG-536M**
Recommended Barrier Control:	**FB-536M**

Melanoma gp100/D5 is a mouse monoclonal antibody that reacts against an antigen present in melanocytic tumors such as melanomas. It reacted positively against melanocytic tumors but not other tumors, thus demonstrating specificity and sensitivity. This antibody is very useful to identify malignant melanoma. Metastatic amelanotic melanoma can often be confused with a variety of poorly differentiated carcinomas, large cell lymphomas, sarcomas, spindle cell carcinomas and various types of mesenchymal neoplasms.

Melanoma Associated Antigen

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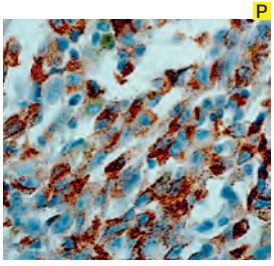

Melanoma stained with Anti-Melanoma associated antigen using DAB chromogen

Clone:	NKI/C3
Isotype:	IgG1
Source:	Mouse
Immunogen:	Purified membranes of human melanoma cells
Specificity:	NKI/C3 antigen
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM077-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM077-10M**
Xmatrx®	**AX077-YCD, AX077-50D**
Concentrated:	**MU077-UC, MU077-5UC**
Recommended Positive Control:	**FG-077M**
Recommended Barrier Control:	**FB-077M**

The melanoma associated antigen is a formalin resistant glycoprotein with a disulphide dependent configuration that is essential for recognition by the NKI/C3 monoclonal antibody. This antibody recognizes a heterogeneous 25-110 kD glycoprotein that is located mainly in the inner side of membranes of cytoplasmic vesicles in melanoma cells. This antibody reacts with melanoma, nevocellular nevi, carcinoids and medullary carcinomas of the thyroid. It does not react with basal cell carcinoma, brain tissue or brain tumors.

Mesothelin

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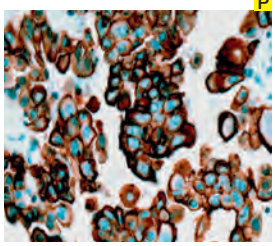

Ovary adenoma stained with anti-Mesothelin using DAB chromogen

Clone:	5B2
Isotype:	IgG1
Source:	Mouse
Immunogen:	Prokaryotic recombinant fusion protein corresponding to approximately 100 amino acids from membrane bound form of mesothelin.
Specificity:	Mesothelin
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM433-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM433-10M**
Xmatrx®	**AX433-YCD, AX433-50D**
Concentrated:	**MU433-UC, MU433-5UC**
Recommended Positive Control:	**FG-433M**
Recommended Barrier Control:	**FB-433M**

Mesothelin, a 40kD glycosyl-phosphatidylinositol–linked cell surface glycoprotein, is present on the surface of the mesothelial cells and may be involved in cell adhesion. It is also seen on mesotheliomas, epithelial ovarian cancers, and some squamous cell carcinomas. Clone 5B2 reactivity has been seen in epitheloid mesotheliomas and adenocarcinomas of lung, ovary, peritoneum, endometrium, pancreas, stomach and colon to a varying degree. Mesothelin is abundant in normal mesothelial cells from which malignant mesotheliomas and ovarian cystadenocarcinomas are derived. This antibody can be used in conjunction with an antibody to calretinin for evaluation of mesotheliomas.

MiTF

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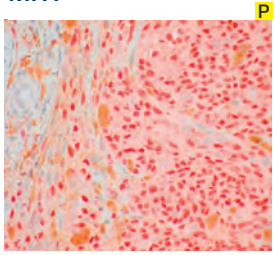

Melanoma tissue stained with Anti-MiTF using AEC chromogen

Clone:	MiTF/A13
Isotype:	IgG1/k
Source:	Mouse
Immunogen:	Human MiTF
Specificity:	MiTF
Localization:	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM554-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM554-10M**
Xmatrx®	**AX554-YCD, AX554-50D**
Concentrated:	**MU554-UC, MU554-5UC**
Recommended Positive Control:	**FG-554M**
Recommended Barrier Control:	**FB-554M**

Micropthalmia-associated Transcription Factor (MiTF) is a basic helix-loop-helix leucine zipper transcription factor involved in melanocyte and osteoclast development. Mutations in MiTF cause auditory pigmentary syndromes, such as Waardenburg Syndrome Type II, Type IIa and Tietz Syndrome in humans. MiTF plays a critical role in the differentiation of various cell types such as neural crest-derived melanocytes, mast cells, osteoclasts and optic cup-derived retinal pigment epithelium. This antibody recognizes serine phosphorylated and non-phosphorylated melanocytic isoforms of micropthalmia. It is useful in identifying malignant melanoma, and distinguishing mast cell lesions of myeloid derivation. A relatively rare class of tumors known as PEComas (tumors showing perivascular epitheloid cell differentiation) express MiTF in a high percentage of cases ~90%).

Mitochondrial Antigen

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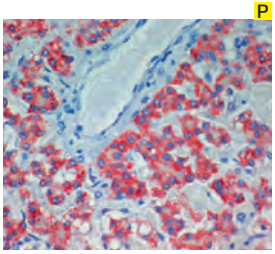

Fetal Liver tissue stained with Anti-Mitochondrial Ag using AEC chromogen

Clone:	113-1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Raji Burkitt's lymphoma cells
Specificity:	Mitochondria
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM213-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM213-10M**
Xmatrx®	**AX213-YCD, AX213-50D**
Concentrated:	**MU213-UC, MU213-5UC**
Recommended Positive Control:	**FG-213M**
Recommended Barrier Control:	**FB-213M**

Monoclonal antibody 113-1 recognizes a 60 kD antigen of human mitochondria. This marker may be useful in identification of mitochondria in cells, tissues, and biochemical preparations. It produces a “spaghetti-like” staining pattern in the cytoplasm of human cells and may be used as a marker of biliary cirrhosis. The antibody stains mitochondria in the cytoplasm of positive cells.

Mismatch Protein Repair (MLH1)

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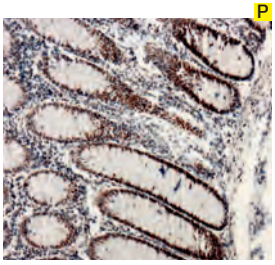


Human colon stained with Anti-MLH1 using DAB chroogen

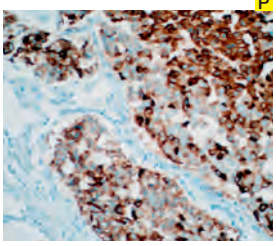
Clone:	ES05
Isotype:	IgG1
Source:	Mouse
Immunogen:	MLH1
Specificity:	MLH1
Localization:	Nuclei
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM703-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM703-10M**
Xmatrx®	**AX703-YCD, AX703-50D**
Concentrated:	**MU703-UC, MU703-5UC**
Recommended Positive Control:	**FG-703M**
Recommended Barrier Control:	**FB-703M**

MLH1 is a mismatch repair protein involved in maintaining the integrity of genetic information alongside MSH2. MSH6 and PMS2. During DNA replication, strand misalignment can occur resulting in alterations to microsatellite repeats, often referred to as microsatellite instability (MSI). These defects in DNA repair pathways have been linked to human carcinogenesis. Mutations in the MLH1 gene have been reported to be found in tumors with MSI, such as some forms of colon cancer e.g., Hereditary nonpolyposis colon cancer (HNPCC), a subset of sporadic carcinomas and breast cancer.

Mucin 1 (MUC1)

P



Breast cancer tissue stained with anti-Human MUC1using DAB chromogen

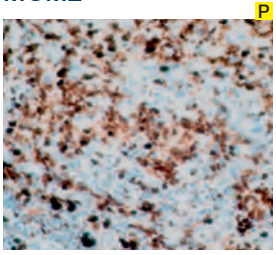
Clone:	EP85
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the C-terminus of of human MUC1 protein
Specificity:	Human MUC1
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN813-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN813-10M**
Xmatrx®	**AY813-YCD, AY813-50D**
Concentrated:	**NU813-UC, NU813-5UC**
Recommended Positive Control:	**FG-813N**
Recommended Barrier Control:	**FB-813N**

MUC1 is expressed in many types of epithelial cells in the gastrointestinal tract, lung, breast, pancreas and genitourinary tract. MUC1 is also detected in activated and unactivated T-cells. In some tumors derived from epithelial cells, MUC1 expression is associated with tumor type and invasiveness. MUC1 expression has been correlated with invasive growth of ductal carcinomas (IDC) in the pancreas and cholangiocarcinomas in the liver. MUC2 expression has been associated with the intraductal papillary mucinous tumors of the pancreas, a noninvasive carcinoma. Additionally, MUC1 antibody aids in the prediction of the aggressiveness of carcinomas of the breast, stomach, colon, ampulla of Vater and renal cell carcinoma. Strong correlation has been observed between MUC1 expression and breast cancer progression.

MCM2

P



Tonsil stained with anti-Human MCM2 using DAB chromogen

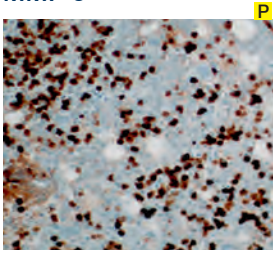
Clone:	EP40
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human MCM2 protein
Specificity:	Human MCM2
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN834-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN834-10M**
Xmatrx®	**AY834-YCD, AY834-50D**
Concentrated:	**NU834-UC, NU834-5UC**
Recommended Positive Control:	**FG-834N**
Recommended Barrier Control:	**FB-834N**

MCM2 also known as DNA replication licensing factor is a member of the MCM family that regulates mammalian DNA replication. This family is composed of six related subunits, called the hexameric MCM2-7 complex, that are conserved in all eukaryotes. It functions as a replicative helicase, the molecular motor that both unwinds duplex DNA and powers fork progression during DNA replication. In the cell cycle, levels of the MCM family gradually increase in a variable manner from G0 into the G1/S phase. In the G0 stage, the amounts of MCM2 and MCM5 proteins are much lower than that of MCM7 and MCM3 proteins, so some of them participate in cell cycle regulation. MCM2 is localized in the nucleus throughout interphase. It is required for entry into the S phase and cell division. Anti-MCM2 labels proliferating cells in normal and tumor tissue. MCM2 has been used as a proliferation marker superior to Ki-67 for identification of premalignant lesions in colon, lung and other epithelial tissues. In addition, the MCM2 antibody is helpful in the distinction of malignant mesothelioma (higher labeling index) from reactive mesothelial proliferation.

MMP-9

P



Bone marrow stained with anti-Human MMP-9 using DAB chromogen

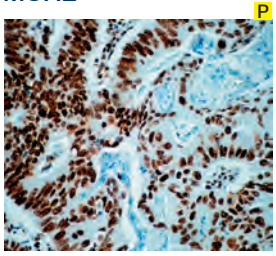
Clone:	EP127
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human MMP-9 protein
Specificity:	Human MMP-9
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN816-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN816-10M**
Xmatrx®	**AY816-YCD, AY816-50D**
Concentrated:	**NU816-UC, NU816-5UC**
Recommended Positive Control:	**FG-816N**
Recommended Barrier Control:	**FB-816N**

Matrix metalloproteinases (MMPs), a family of peptidase enzymes, plays a critical role in degradation of extracellular matrix components in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes. MMP-9, also designated as 92-kDa Type IV Collagenase or gelatinase B is a member of MMPs, which is produced as a 92-kDa pro-enzyme by neutrophils and macrophages as a normal constituent and released into the extracellular environment after activation in inflammatory tissues. MMP-9 is predominantly expressed in neutrophils, macrophages, mast cells and stromal cells. The expression levels of MMP-9 in tumors are elevated compared with the corresponding normal tissues in a variety of cancer types, including breast, colon, gastric and nasopharyngeal cancers.

MSH2

P



Colon cancer tissue stained with anti-MSH2 using DAB chromogen

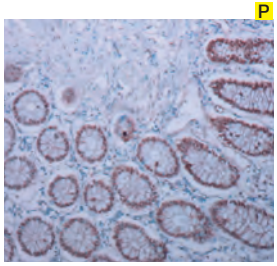
Clone:	SP46
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to internal region of human MSH2
Specificity:	Human MSH2
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN743-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN743-10M**
Xmatrx®	**AY743-YCD, AY743-50D**
Concentrated:	**NU743-UC, NU743-5UC**
Recommended Positive Control:	**FG-743N**
Recommended Barrier Control:	**FB-743N**

MutS homologue 2 (MSH2) is a DNA mismatch repair protein that belongs to the MutS family. MSH2 forms two different heterodimers: MutS alpha (MSH2-MSH6) and MutS beta (MSH2-MSH3), which bind to DNA mismatches thereby initiating DNA repair. MSH2 is involved in DNA repair as a mismatch repair protein, and mutations of MSH2 are found in approximately 50% of inherited non polyposis colorectal carcinoma (HNPCC) (Lynch syndrome) cases. HNPCC is an autosomal, dominantly inherited disease associated with marked increase in cancer susceptibility. It is characterized by a familial predisposition to early onset colorectal carcinoma and extra-colonic cancers of the gastrointestinal, urological and female reproductive. Immunohistochemical analysis of MSH2 expression has been reported to be a practical and reliable method for the routine detection of the vast majority of MSI-H colorectal adenocarcinomas.

MSH2

P



Colon cancer tissue stained with anti-MSH2 using DAB chromogen

Clone:	RED2
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human MSH2
Specificity:	Human MSH2
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN744-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN744-10M**
Xmatrx®	**AY744-YCD, AY744-50D**
Concentrated:	**NU744-UC, NU744-5UC**
Recommended Positive Control:	**FG-744N**
Recommended Barrier Control:	**FB-744N**

MutS homologue 2 (MSH2) is a DNA mismatch repair protein that belongs to the MutS family. MSH2 forms two different heterodimers: MutS alpha (MSH2-MSH6) and MutS beta (MSH2-MSH3), which bind to DNA mismatches thereby initiating DNA repair. MSH2 is involved in DNA repair as a mismatch repair protein, and mutations of MSH2 are found in approximately 50% of inherited non polyposis colorectal carcinoma (HNPCC) (Lynch syndrome) cases. HNPCC is an autosomal, dominantly inherited disease associated with marked increase in cancer susceptibility. It is characterized by a familial predisposition to early onset colorectal carcinoma and extra-colonic cancers of the gastrointestinal, urological and female reproductive. Immunohistochemical analysis of MSH2 expression has been reported to be a practical and reliable method for the routine detection of the vast majority of MSI-H colorectal adenocarcinomas.

MSH6

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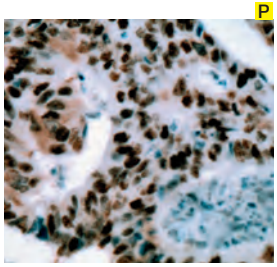

Colon carcinoma stained with Anti-MSH6 using DAB chromogen

Clone:	2D4B5
Isotype:	IgG3
Source:	Mouse
Immunogen:	Human MSH6
Specificity:	MSH 6
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM454-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM454-10M**
Xmatrx®	**AX454-YCD, AX454-50D**
Concentrated:	**MU454-UC, MU454-5UC**
Recommended Positive Control:	**FG-454M**
Recommended Barrier Control:	**FB-454M**

Mouse anti-MSH6 is a monoclonal antibody specific for MSH6. Inherited (germline) mutations in DNA mismatch repair genes such as MLH1, MSH2, MSH3, and MSH6 are the major causes of hereditary nonpolyposis colorectal cancer (HNPCC) syndrome. A characteristic of HNPCC tumors is microsatellite instability (MSI). Detection of microsatellite instability in a tumor sample will increase the probability of detecting a germline mutation in a DNA mismatch repair gene from the patient sample. Thus, MSI analysis is usually performed prior to proceeding with full mutation analysis of mismatch repair genes.

MUC4

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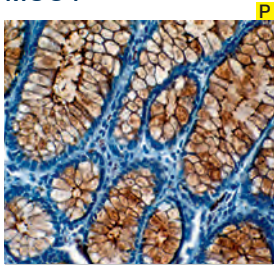

Colonic mucosa stained with MUC4 antibody showing diffuse cytoplasmic positivity. (DAB chromogen used)

Clone:	1G8
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human MUC4
Specificity:	MUC4
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM455-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM455-10M**
Xmatrx®	**AX455-YCD, AX455-50D**
Concentrated:	**MU455-UC, MU455-5UC**
Recommended Positive Control:	**FG-455M**
Recommended Barrier Control:	**FB-455M**

MUC4 is a membrane-associated protein of the mucin (MUC) gene family, encoded by a gene on chromosome 3q29 and produced by epithelial cells as a heterodimer. The MUC4 protein is thought to play a protective role for vulnerable epithelia, particularly in the airway, eye, female reproductive tract, and mammary gland. Alterations in MUC4 expression have been observed in association with a variety of inflammatory and neoplastic states; reduction or loss has been reported in non-small cell lung carcinoma, hyperplastic polyps of the colon, and serrated colon adenomas, while overexpression of the MUC4/Sialomucin complex (SMC) has been identified in malignant progression of mammary tumors in humans.

MUC5AC

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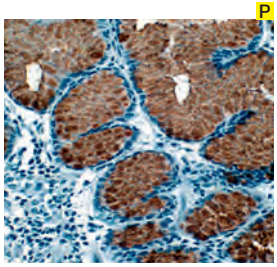


Gastro-intestinal tissue stained with Anti-MUC5AC using DAB chromogen

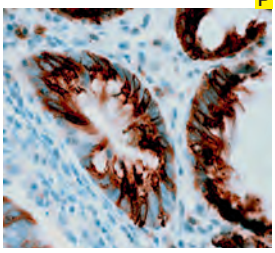
Clone:	45M1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human MUC5AC
Specificity:	MUC5AC
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM456-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM456-10M**
Xmatrx®	**AX456-YCD, AX456-50D**
Concentrated:	**MU456-UC, MU456-5UC**
Recommended Positive Control:	**FG-456M**
Recommended Barrier Control:	**FB-456M**

Mucins are high molecular weight glycoproteins with 80% carbohydrates and 20% core protein. Gastric Mucin 5AC antigen is found in columnar mucus cells of surface gastric epithelium and in goblet cells of the fetal and precancerous colon but not in normal colon. Resurgence of gastric mucin during colonic carcinogenesis is suggestive of either re-expression of the peptide core of gastric mucin in the adult colon or due to changes in the glycosylation pattern of mucin, which expose the hidden Mucin 5AC antigen.

Mucin 2 (MUC2)

P



Colon stained with Anti-Mucin 2 using DAB chromogen

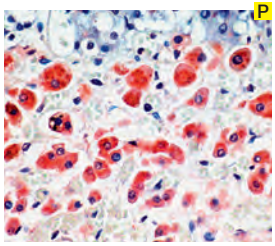
Clone:	CCP58
Isotype:	IgG1
Source:	Mouse
Immunogen:	Synthetic human MUC2 (MI-29) peptide (VNTR region)
Specificity:	MUC2
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM358-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM358-10M**
Xmatrx®	**AX358-YCD, AX358-50D**
Concentrated:	**MU358-UC, MU358-5UC**
Recommended Positive Control:	**FG-358M**
Recommended Barrier Control:	**FB-358M**

Mucins are a group of high molecular weight, highly glycosylated proteins expressed in normal and carcinogenic colon. MUC2 is a 520-kD glycoprotein of the gastrointestinal tract. The core of the glycoprotein consists of a variable number of tandem repeats of a 23 amino acid sequence. Mucin 2 is found in normal epithelial cells of the colon or in colon carcinoma. MUC2 glycoprotein is expressed in mucinous tumors but not in serous tumors. This antibody stains positive for colon gastric cancer cells, normal intestine, colon and salivary glands, and some human colon carcinoma cell lines (LS174T). This antibody localizes Mucin 2 (MUC2) protein in cytoplasm.

Multi-Drug Resistance Marker (P-Glycoprotein)

P



Adrenal gland tissue stained with Anti-multi-drug resistance marker using AEC chromogen

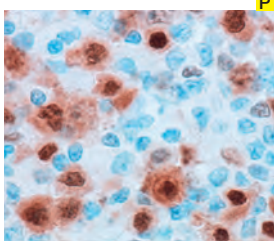
Clone:	MDR88
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Recombinant P-glycoprotein containing four tandem repeats of the amino acid sequence 1096 through 1252, once of the cytoplasmic domains near the C-terminus
Specificity:	Multi-Drug Resistance Marker
Localization:	Membrane & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM391-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM391-10M**
Xmatrx®	**AX391-YCD, AX391-50D**
Concentrated:	**MU391-UC, MU391-5UC**
Recommended Positive Control:	**FG-391M**
Recommended Barrier Control:	**FB-391M**

Multi-Drug Resistance Marker (P-Glycoprotein) is a 170 kD cell membrane protein of the multi-drug resistance gene, MDR-1. Studies have linked the presence of P-Glycoprotein with resistance to a wide variety of chemotherapeutic agents. P-Glycoprotein is associated with an afflux pump that actively removes drug from the cell, thereby conferring resistance to a variety of drugs. P-Glycoprotein is also found in various concentrations in most normal tissues, suggesting that the primary role for this protein is in normal secretion of physiological metabolites. This antibody stains P-Glycoprotein in membrane and certain degree of cytoplasm of positive cells.

Mum1/IRF4

P



Hodgkin's lymph node stained with anti-Human Mum1/IRF4 using DAB chromogen

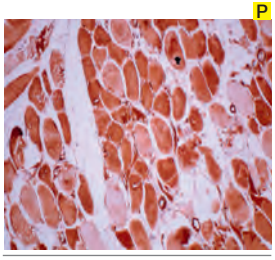
Clone:	SP114
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide near C-terminus of human MUM1/IRF4
Specificity:	Human Mum1/IRF4
Localization:	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN750-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN750-10M**
Xmatrx®	**AY750-YCD, AY750-50D**
Concentrated:	**NU750-UC, NU750-5UC**
Recommended Positive Control:	**FG-750N**
Recommended Barrier Control:	**FB-750N**

MUM1/IRF4 protein is a member of the interferon regulatory factor (IRF) family of transcriptional factors initially described as downstream regulators of interferon signaling. The quantity of this factor varies within the hematopoietic system in a lineage and stage-specific way. It is considered to be a key regulator of several steps in lymphoid, myeloid, and dendritic cell differentiation and maturation. MUM1/IRF4 expression is observed in many lymphoid and myeloid malignancies, and may be a promising target for the treatment of some of these neoplasms. MUM1 is a valuable marker for understanding and characterizing histogenesis of B-cell lymphomas. It is an excellent marker for Reed-Sternberg cells of classic Hodgkin's disease.

Muscle Actins

P



Muscle tissue stained with Anti-Actin, Muscle Specific, using DAB chromogen

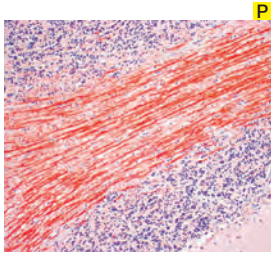
Clone:	Actin 88 Cocktail
Isotype:	IgG
Source:	Mouse
Immunogen:	Synthetic peptides of actin
Specificity:	Muscle actins
Localization:	Cytoplasm
Pre-treatment:	EZ-EZ-AR1 elegance
Manual/i6000:	None
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM381-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM381-10M**
Xmatrx®	**AX381-YCD, AX381-50D**
Concentrated:	**MU381-UC, MU381-5UC**
Recommended Positive Control:	**FG-381M**
Recommended Barrier Control:	**FB-381M**

Actin is a major component of the cytoskeleton and is present in every cell type. It is a globular protein, about 5 nm in diameter, composed of one polypeptide chain with a mass of approximately 47 kD. Four muscle actins have been identified: skeletal alpha, cardiac alpha, vascular smooth muscle alpha, and enteric smooth muscle gamma actin. These actins are very similar in their primary structure. Monoclonal Actin 88 is for the specific localization of actins in muscle tissue. Staining with this antibody distinguishes smooth muscle cells from fibroblasts in mixed cultures. This antibody stains skeletal, cardiac and smooth muscle cells.

Myelin Basic Protein

P



Cerebellum tissue stained with Anti-Myelin basic protein using AEC chromogen

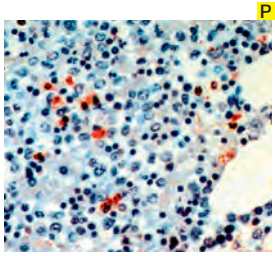
Clone:	MBP88
Isotype:	IgG1
Source:	Mouse
Immunogen:	This antibody is the fusion product of SP/2 myeloma cells and the splenocytes from an A/J mouse immunized with peptide of Myelin Basic Protein
Specificity:	Myelin Basic Protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM380-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM380-10M**
Xmatrx®	**AX380-YCD, AX380-50D**
Recommended Positive Control:	**FG-380M**
Recommended Barrier Control:	**FB-380M**

Myelin Basic Protein (MBP), a single-chain, flexible polypeptide of about 18.5 kD is localized in both the compact myelin sheath and myelin ovoids. MBP has not been demonstrated in rough endoplasmic reticulum, lysosomes, or any other cytoplasmic organelles. MBP can be used as a marker for oligodendrocytes, Schwann cells and malignant Schwannomas. This antibody is useful in defining some of the elements in the catabolism of myelin in multiple sclerosis, experimental encephalomyelitis, and other diseases of the central nervous system. This antibody stains Myelin Basic Protein.

Myeloid Specific Antigen

P



Bone marrow stained with Anti-Myeloid Specific Antigen using Fast Red chromogen

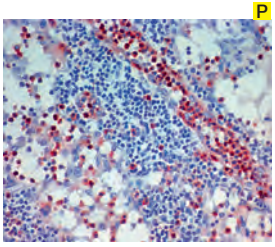
Clone:	BM-3
Isotype:	IgG1
Source:	Mouse
Immunogen:	Nuclei from pokeweed mitogen stimulated human peripheral blood lymphocytes
Specificity:	Myeloid Specific Antigen
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM216-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM216-10M**
Xmatrx®	**AX216-YCD, AX216-50D**
Recommended Positive Control:	**FG-216M**
Recommended Barrier Control:	**FB-216M**

BM-3 is an early marker of myeloid differentiation. BM-3 recognizes a 13 kD myeloid specific antigen. The BM-3 antibody along with BM-1 and BM-2, provides the capacity to stain early precursor and mature forms of human myeloid cells. It is expressed during the early phases of myeloid differentiation. This antigen is present in human granulocytes, monocytes, and myeloid precursor cells. It has no reactivity with any other cell type in human tissues. This antibody stains cytoplasm in human granulocytes (98%) and monocytes (80%) residing in lymphoid and non-lymphoid tissues in formalin-fixed, paraffin-embedded tissue sections, bone marrow smears or blood smears.

Myeloid Specific Antigen

P



Lymph node stained with Anti-Myeloid Specific Antigen using AEC chromogen

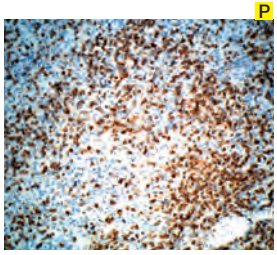
Clone:	BM-1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Nuclei from human peripheral blood mononuclear cells
Specificity:	Myeloid Specific Antigen
Localization:	Cytoplasm
Pre-treatment:	None
Manual/i6000:	None
Xmatrx:	None

Ready-to-Use (Manual):	**AM164-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM164-10M**
Xmatrx®	**AX164-YCD, AX164-50D**
Concentrated:	**MU164-UC, MU164-5UC**
Recommended Positive Control:	**FG-164M**
Recommended Barrier Control:	**FB-164M**

This 183 kD myeloid specific antigen is a DNA binding protein expressed in early precursor myeloid cells. Monoclonal antibodies BM-1 and BM-2 are useful in the identification of early precursor and mature forms of human myeloid cells, respectively. The antigens are also expressed in granulocytic sarcomas and myeloid leukemias, myeloid precursor cells of bone marrow, scattered cells in the peripheral cortex of the thymus, granulocytes, granulocytic sarcomas, acute myelogenous leukemia (AML), chronic myelogenous leukemias and myelomonocytic leukemias. This antibody stains myeloid specific antigen in the nucleus of myeloid precursor cells of bone marrow, scattered cells in the peripheral cortex of the thymus, granulocytes, and granulocytic sarcomas.

Myeloperoxidase (MPO)

P



Spleen tissue stained with Anti-Myeloperoxidase using DAB chromogen

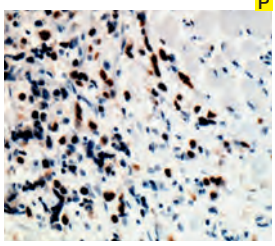
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	Purified human granulocytic MPO
Specificity:	Myloperoxidase
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR496-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR496-10R**
Xmatrx®	**AW496-YCD, AW496-50D**
Concentrated:	**PU496-UP, PU496-5UP**
Recommended Positive Control:	**FG-496P**
Recommended Barrier Control:	**FB-496P**

Myeloperoxidase is an important enzyme used by granulocytes during phagocytic lysis of foreign particles engulfed. In normal tissues and in a variety of myeloproliferative disorders, myeloid cells of both neutrophilic and eosinophilic types at all stages of maturation, exhibit strong cytoplasmic reactivity for MPO. Erythroid precursors, megakaryocytes, lymphoid cells, mast cells, and plasma cells are nonreactive. MPO is not observed in the neoplastic cells of a wide variety of epithelial tumors and sarcomas. MPO is useful in differentiating between myeloid and lymphoid leukemias.

Myf4

P



Rhabdomyosarcoma stained with Anti-Myf4 using DAB chromogen

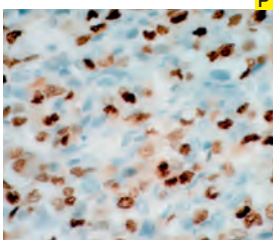
Clone:	LO26
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant fusion protein corresponding to the Myf4 gene
Specificity:	Myf4
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM432-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM432-10M**
Xmatrx®	**AX432-YCD, AX432-50D**
Concentrated:	**MU432-UC, MU432-5UC**
Recommended Positive Control:	**FG-432M**
Recommended Barrier Control:	**FB-432M**

Myf4 belongs to the family of the muscle regulatory proteins Myf3, Myf4, Myf5, and Myf6 that share a highly conserved DNA binding and dimerization domain consisting of a cluster of basic amino acids and a potential helix-loop-helix structure. Myogenin (Myf4) expressed early in skeletal muscle differentiation is a sensitive and specific marker for rhabdomyosarcoma and is more specific than desmin and muscle-specific actin and more sensitive than myoglobin.

Myogenin

P



Rhabdomysarcoma stained with anti-Human Myogenin using DAB chromogen

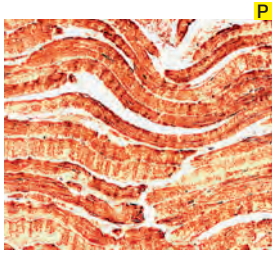
Clone:	EP162
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human Myogenin
Specificity:	Human Myogenin
Localization:	Nuclues
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN789-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN789-10M**
Xmatrx®	**AY789-YCD, AY789-50D**
Concentrated:	**NU789-UC, NU789-5UC**
Recommended Positive Control:	**FG-789N**
Recommended Barrier Control:	**FB-789N**

Myogenic factors are transcription factors consisting of an amino acid rich region and a helix-loop-helix (HLH) structure, which can promote muscle development and maintain muscle-specific gene expression by transactivation. Myogenin, one of the myogenic regulatory factors, plays a key role in determining the commitment and differentiation of primitive mesenchymal cells into skeletal muscle. The expression of Myogenin is restricted to cells of skeletal muscle origin, but it is not detected in adult skeletal muscles. It is therefore considered to be an extremely reliable and specific marker for diagnosing rhabdomyosarcomas.

Myoglobin

P



Skeletal Muscle stained with Anti-Myoglobin using DAB chromogen

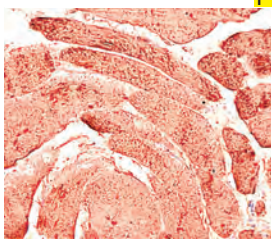
Clone:	MG-1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Purified human skeletal muscle myoglobin
Specificity:	Myoglobin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM012-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM012-10M**
Xmatrx®	**AX012-YCD, AX012-50D**
Concentrated:	**MU012-UC, MU012-5UC**
Recommended Positive Control:	**FG-012M**
Recommended Barrier Control:	**FB-012M**

Myoglobin functions as a cellular oxygen storage mechanism with some contribution to oxygen transport into the cell. The molecular mass of human myoglobin is 17.8 kD. Myoglobin is present exclusively in striated muscle, with the single exception of chicken gizzard smooth muscle. It is a valuable tool used in distinguishing rhabdomyosarcomas from other soft tissue tumors. After muscle tissue damage such as crush injuries, burns, myocardial infarction and muscle diseases, increased levels of myoglobin are found in the blood and urine. This antibody stains positive in the cytoplasm of muscle cells.

Myoglobin

P



Skeletal muscle stained with Anti-Myoglobin using AEC chromogen

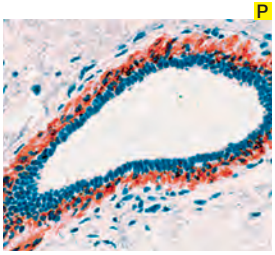
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Highly purified human myoglobin
Specificity:	Myoglobin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR012-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR012-10R**
Xmatrx®	**AW012-YCD, AW012-50D**
Concentrated:	**PU012-UP, PU012-5UP**
Recommended Positive Control:	**FG-012P**
Recommended Barrier Control:	**FB-012P**

Myoglobin functions as a cellular oxygen storage mechanism with some contribution to oxygen transport into the cell. The molecular mass of human myoglobin is 17.8 kD. Myoglobin is present exclusively in striated muscle, with the single exception of chicken gizzard smooth muscle. Since myoglobin is the only striated muscle-specific antigen, it is a valuable tool used in distinguishing rhabdomyosarcomas from other soft tissue tumors. After muscle tissue damage such as crush injuries, burns, myocardial infarction and muscle diseases, increased levels of myoglobin are found in the blood and urine. This antibody reacts with human myoglobin.

Myosin Heavy Chains, Smooth Muscle

P



Myoepithelial cells stained with Anti-Myosin heavy chains using AEC chromogen

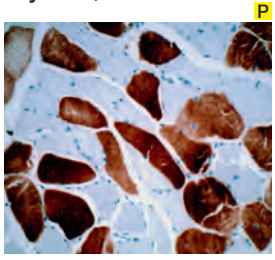
Clone:	SMMS.1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Crude human uterus caldesmon
Specificity:	Smooth muscle myosin heavy chains
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM331-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM331-10M**
Xmatrx®	**AX331-YCD, AX331-50D**
Concentrated:	**MU331-UC, MU331-5UC**
Recommended Positive Control:	**FG-331M**
Recommended Barrier Control:	**FB-331M**

SMMS.1 is approximately 204 kD and is considered to be the marker for smooth muscle cell phenotypes. It has been designed for specific localization of both vascular and visceral smooth muscle. Monoclonal antibody to smooth muscle myosin heavy chains in combination with monoclonal antibodies to calponin and heavy caldesmon may be used to study the differences between benign, in-situ lesions and invasive carcinomas. Monoclonal antibody stains smooth muscle myosin heavy chains in vascular and visceral smooth muscle, myoepithelial cells in normal and benign human mammary gland and certain stromal myofibroblasts.

Myosin, Skeletal Muscle

P



Skeletal muscle stained with Anti-Myosin using DAB chromogen

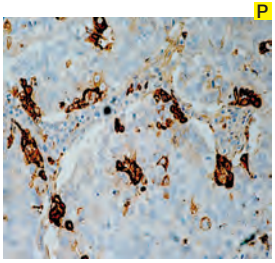
Clone:	MY-32
Isotype:	IgG1
Source:	Mouse
Immunogen:	Rabbit muscle myosin
Specificity:	Skeletal-muscle myosin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM109-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM109-10M**
Xmatrx®	**AX109-YCD, AX109-50D**
Concentrated:	**MU109-UC, MU109-5UC**
Recommended Positive Control:	**FG-109M**
Recommended Barrier Control:	**FB-109M**

Myosin along with actin forms the fundamental contractile unit of muscle, the myofibril. It has a molecular mass of 500 kD and is comprised of two identical heavy chains (200 kD each) and four light chains (15-20 kD). Monoclonal antibody MY-32 to fast-twitch skeletal myosin may be used for detecting cross-striated muscle differentiation in tumors. This antibody does not stain human or animal cardiac or smooth-muscle myosin. Staining of fast-twitch (type II) isomyosin molecules has been demonstrated on human skeletal muscle. The antibody stains human, rabbit, rat, mouse, bovine, chicken, and guinea pig skeletal myosin.

Napsin A

P



Lung adenocarcinoma stained with anti-Napsin A using DAB chromogen

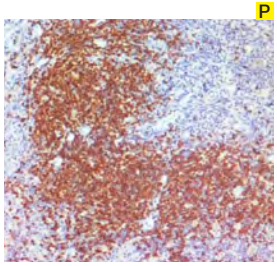
Clone:	IP64
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Napsin
Specificity:	Napsin A
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM701-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM701-10M**
Xmatrx®	**AX701-YCD, AX701-50D**
Concentrated:	**MU701-UC, MU701-5UC**
Recommended Positive Control:	**FG-701M**
Recommended Barrier Control:	**FB-701M**

Napsin A has specific function in normal alveolar epithelium and is proposed to play a role in the protelytic processing of surfactant precursors. Napsin A is reported to be predominantly expressed in lamellar bodies of type II pneumocutes, secondary lysosymes of alveolar macrophages, respiratory epithelium of terminal and respiratory bronchioles, plasma cells within a subset of lymphocytes in normal lung, as well as in epithellial cells of renal tubiles in normal kidney and is weakly expressed in normal spleen.

PAX-5

P



Lymph node stained with Pax-5

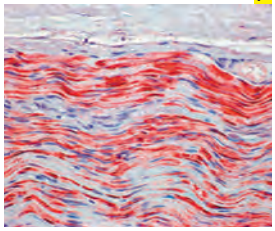
Clone:	24/Pax-5
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human Pax-5 aa. 151-306
Specificity:	PAX-5
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM967-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM967-10M**
Xmatrx®	**AX967-50D, AX967-YCD**
Concentrated:	**MU967-UC, MU967-5UC**
Recommended Positive Control:	**FG-967M**
Recommended Barrier Control:	**FB-967M**

PAX5 is a member of the paired box (PAX) family of transcription factors. Paired box transcription factors are important regulators in early development and alterations in the expression of their genes are thought to contribute to neoplastic transformation. PAX5 is the B-cell lineage specific activator protein (BSAP) that is expressed at early but not late stages of B-cell differentiation. Its expression has also been detected in developing CNS and testis, therefore, PAX5 may not only play an important role in B-cell differentiation but also in neural development and spermatogenesis. Mutations in the gene can result in leukemia and acute lymphoblastic. The PAX5 expression at the protein level is reliably detected by immunohistochemistry in routine biopsies.

Neurofilament

P



Nerve stained with Anti-Neurofilament using AEC chromogen

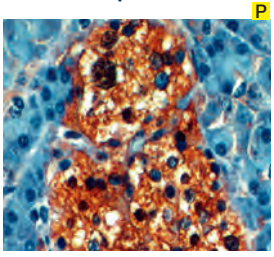
Clone:	NE-14
Isotype:	IgG1
Source:	Mouse
Immunogen:	Neurofilament purified from human brain
Specificity:	Neurofilaments
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM073-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM073-10M**
Xmatrx®	**AX073-YCD, AX073-50D**
Concentrated:	**MU073-UC, MU073-5UC**
Recommended Positive Control:	**FG-073M**
Recommended Barrier Control:	**FB-073M**

Neurofilaments (10 nm diameter) and microtubules (25 nm diameter) comprise the main structural elements of neuronal axons, dendrites, and perikerya. Neurofilaments are composed of three major polypeptides referred to as the neurofilament triplet with approximate molecular weights of 200 kD, 160 kD and 68 kD. This antibody can be used for positive identification of neurons in the central and peripheral nervous systems. In general, co-expression of keratin and neurofilament should be interpreted as indicating neuroendocrine differentiation of a given tissue or neoplasm. The antibody stains Neurofilament in sections of brain and other tissues.

Neuron Specific Enolase (NSE)

P



Pancreatic islets stained with anti-NSE using DAB chromogen

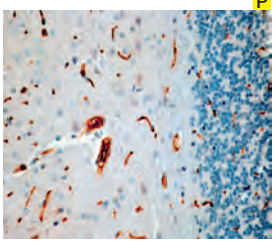
Clone:	MIG-N3
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Purified human gamma enolase
Specificity:	Neuron specific enolase (NSE)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM055-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM055-10M**
Xmatrx®	**AX055-YCD, AX055-50D**
Concentrated:	**MU055-UC, MU055-5UC**
Recommended Positive Control:	**FG-055M**
Recommended Barrier Control:	**FB-055M**

NSE is a gene which encodes for a protein found in matured neurons and is used in panels along with chromogranin, synaptophysin and neurofilament. Elevated NSE concentrations are observed in patients with neuroblastoma, pancreatic islet cell carcinoma, medullary thyroid carcinoma, pheochromocytoma, and other neuroendocrine tumors as well as certain benign conditions. NSE is specific for such proteins, and aids in detection of neural and neuroendocrine lineage.

NGF Receptor

P



Brain stained with anti-NGFR using DAB chromogen

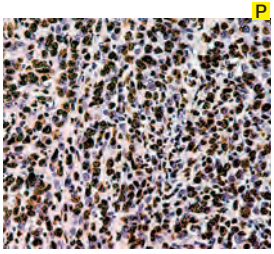
Clone:	EP31
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human NGFR protein
Specificity:	NGFR
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN738-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN738-10M**
Xmatrx®	**AY738-YCD, AY738-50D**
Concentrated:	**NU738-UC, NU738-5UC**
Recommended Positive Control:	**FG-738N**
Recommended Barrier Control:	**FB-738N**

NGFR, also known as p75NTR, is a receptor of neurotrophins and involved in survival, differentiation and apoptosis of neurons. It is expressed in neuronal cells in various tissues and tumors with neuronal origin. NGFR is also expressed in melanocytes, myoepithelial cells, basal-like cells, perivascular cells and lymphoid dendritic cells. NGFR is helpful in identification of perineural invasion of malignant skin tumors with a panel of antibodies. It is also a complementary marker to S-100 for identification of desmoplastic melanomas.

Nuclear Ribonucleoprotein

P



Spleen tissue stained with Anti-Nuclear ribonucleoprotein using DAB chromogen

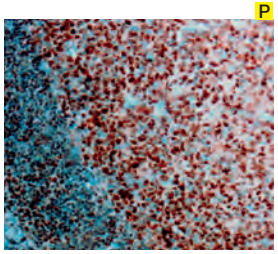
Clone:	58-15
Isotype:	IgG
Source:	Mouse
Immunogen:	Isolated nuclei
Specificity:	Nuclear Ribonucleo protein particles
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM230-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM230-10M**
Xmatrx®	**AX230-YCD, AX230-50D**
Concentrated:	**MU230-UC, MU230-5UC**
Recommended Positive Control:	**FG-230M**
Recommended Barrier Control:	**FB-230M**

Monoclonal antibody 58-15 is one such antibody that recognizes a 36 kD nuclear antigen that is organized into discrete 20-80 nm electron-dense nuclear granules. Immunohistochemical analyses in a variety of different tumors indicate that antinuclear monoclonal antibodies may be useful for probing the cell cycle dependent modulation of nuclear antigens. This antibody stains a 20-80 nm electron dense nuclear structure with highest labeling densities found in nuclear ribonucleoprotein particles, although heterochromatin, euchromatin, and nucleoli may also be stained.

Oct-2

P



Tonsil tissue stained with anti-Human OCT-2 using DAB chromogen

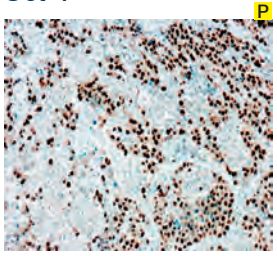
Clone:	EP115
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human Oct-2protein
Specificity:	Human Oct-2
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN830-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN830-10M**
Xmatrx®	**AY830-YCD, AY830-50D**
Concentrated:	**NU830-UC, NU830-5UC**
Recommended Positive Control:	**FG-830N**
Recommended Barrier Control:	**FB-830N**

Octamer transcription factor-2 (OCT-2) possesses a leucine zipper domain and belongs to the POU family of transcription factors. It specifically binds to the octamer motif (5- ATTTCAT-3), activates immunoglobulin gene expression and regulates transcription in a number of tissues. OCT-2 is important for the expression of B cell specific genes, such as CD20 and CRISP-3. OCT-2 is expressed in mature B cells, predominantly germinal center B cells. Low expression of OCT-2 has been found in immature B cells, T cells and myelomonocytic cells. OCT-2 reactivity in epithelial cells and neuronal cells has also been reported. The OCT-2 antibody labels various B cell lymphomas with strong expression in germinal center-derived lymphomas. In a study on Hodgkin's lymphoma (HL), OCT-2 positivity has been observed in 15 out of 15 lymphocyte predominance HLs, but none of the 29 classic HLs.

Oct-4

P



Testis stained with anti-Oct-4 using DAB chromogen

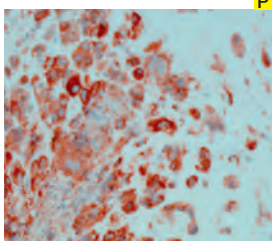
Clone:	EP143
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human Oct-4 protein
Specificity:	Oct-4
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN724-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN724-10M**
Xmatrx®	**AY724-YCD, AY724-50D**
Concentrated:	**NU724-UC, NU724-5UC**
Recommended Positive Control:	**FG-724N**
Recommended Barrier Control:	**FB-724N**

Oct-4 transcription factor is initially active as a maternal factor in the oocyte but remains active in embryos throughout the preimplantation period. Oct-4 expression is associated with an undifferentiated phenotype and tumors. Oct-4 is a sensitive and specific marker for germ cell tumors. It is consistently detected in carcinoma in situ/ gonadoblastoma, seminomas, germinoma, dysgerminoma, and embryonal carcinoma but not in the differentiated components of nonseminomas, i.e., teratomas, yolk sac tumors, and choriocarcinomas. It is useful in the identification of primary as well as metastatic germ cell tumors.

Osteonectin

P



Osteosarcoma stained with Anti-Osteonectin using DAB chromogen

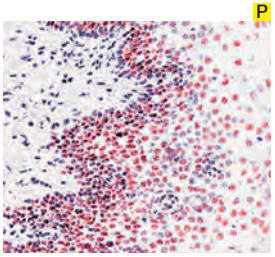
Clone:	OST1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human osteonectin
Specificity:	Osteonectin protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx	HX032-YCD

Ready-to-Use (Manual):	**AM387-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM387-10M**
Xmatrx®	**AX387-YCD, AX387-50D**
Concentrated:	**MU387-UC, MU387-5UC**
Recommended Positive Control:	**FG-387M**
Recommended Barrier Control:	**FB-387M**

Bone matrix consists of collagen and non-collagenous proteins. Osteonectin, a 32-kD calcium-binding glycoprotein, is found in a variety of cell types, which include osteoblastic epithelial cells and fibroblasts. Osteonectin is a useful biochemical marker for bone-related tumors. Thus, osteonectin antibody can be used to demonstrate the presence of osteonectin in active osteoblasts and osteoprogenitor cells as well as in young osteocytes.

p105 Proliferation-Associated Nuclear Antigen

P



Oral mucosa stained with Anti-p105 using AEC chromogen

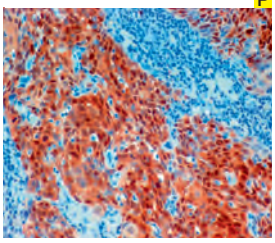
Clone:	2B3
Isotype:	IgM
Source:	Mouse
Immunogen:	Pokeweed mitogen-stimulated human peripheral blood lymphocytes
Specificity:	p105 proliferation-associated nuclear antigen
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM317-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM317-10M**
Xmatrx®	**AX317-YCD, AX317-50D**
Concentrated:	**MU317-UC, MU317-5UC**
Recommended Positive Control:	**FG-317M**
Recommended Barrier Control:	**FB-317M**

Antibody to p105 is directed against two polypeptides with molecular mass of 105 and 41 kD. Anti-p105 is the only immunological reagent known to preferentially stain interchromatin granules, a domain within the nuclear matrix responsible for RNA synthesis. The p105 antigen is thought to play an important role in RNA metabolism, RNA transport, or cell-cycle regulation. Like Ki-67, p105 is a proliferation-associated nuclear antigen that shows increased expression in proliferating cells. In normal cells p105 staining is absent during the early phases of the cell cycle. During G2 and mitosis, p105 levels increase dramatically. Antibody to p105 may prove useful for identifying malignancies and in studying chromatin structure and malignant transformations.

p16 (INK4a)

P



Cervical carcinoma stained with Anti-p16 using DAB as chromogen

Clone:	G175-405
Isotype:	IgG
Source:	Mouse
Immunogen:	Human p16 (INK4a) fusion protein
Specificity:	P16
Localization:	Nucleus and/or Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/**i6000**:	HK547-XAK
Xmatrx:	HX032-YCD

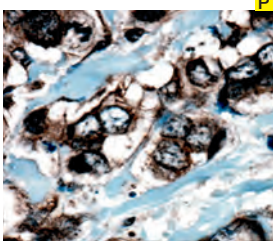
Ready-to-Use (Manual):	**AM540-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM540-10M**
Xmatrx®	**AX540-YCD, AX540-50D**
Concentrated:	**MU540-UC, MU540-5UC**
Recommended Positive Control:	**FG-540M**
Recommended Barrier Control:	**FB-540M**

RUO

p16(INK4a) is a tumor-suppressor protein and that genetic and epigenetic abnormalities in genes controlling the G1 checkpoint can lead to both escape from senescence and cancer formation. The interaction of p16(INK4a) family members can be a binary complex with CDK4/6 or ternary complex with cyclin D-bound CDK4/6 and ultimately results in the inhibition of cell cycle progression. As such, expression of p16(INK4a) is commonly associated with cellular senescence, and disruption of the p16(INK4a) gene is frequently observed in human tumors. The p16(INK4a) locus is deleted in a wide spectrum of tumors including melanoma, pancreatic adenocarcinoma, glioblastoma, certain leukemias and non-small cell lung cancer. For research use only. Not for use in diagnostic procedures.

p120

P



Breast cancer tissue stained with anti-Human p120 using DAB chromogen

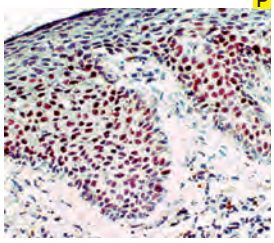
Clone:	SP63
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide from the C-terminus of human p120
Specificity:	Human p120
Localization:	Membrane and cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN760-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN760-10M**
Xmatrx®	**AY760-YCD, AY760-50D**
Concentrated:	**NU760-UC, MU760-5UC**
Recommended Positive Control:	**FG-760N**
Recommended Barrier Control:	**FB-760N**

Delta 1 Catenin (p120) is an efficient tyrosine kinase substrate implicated both in cell transformation by SRC and in ligand-induced receptor signaling through the EGF, PDGF, CSF-1 and ERBB2 receptors. The association of catenins to cadherins produces a complex which is linked to the actin filament network, and which seems to be of primary importance for cadherins cell-adhesion properties. Cytoplasmic accumulation of p120 Catenin has been observed in lung cancer, pancreatic cancer, and gastric cancer and colon cancers and is associated with poor progress in colon cancer patients. In breast lobular neoplasia, anti-p120 Catenin shows a diffuse cytoplasmic immunostaining pattern, while breast ductal neoplasia retains the membrane immunostaining pattern. P120 Catenin antibody is useful in differentiation of lobular carcinoma from ductal carcinoma of the breast and in identifying early lesions of lobular neoplasia.

p21/WAF1

P



Skin stained with Anti-WAF-1using AEC chromogen

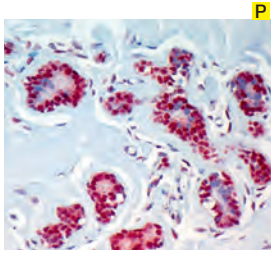
Clone:	4D10
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant fusion protein corresponding to full length WAF1 molecule
Specificity:	p21/WAF1 antigen
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM434-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM434-10M**
Xmatrx®	**AX434-YCD, AX434-50D**
Concentrated:	**MU434-UC, MU434-5UC**
Recommended Positive Control:	**FG-434M**
Recommended Barrier Control:	**FB-434M**

The p21/WAF1 protein is a p53 regulated gene product that has been shown to mediate cell cycle arrest. The growth arrest is due to several properties of this protein, namely cyclin dependent kinase inhibition, and maintenance of cell cycle arrest at G2 by blocking the interaction of Cdc25C with PCNA and inhibition of stress activated protein kinases. In breast cancer the p21/WAF1 expression is generally seen to be negative. This antibody stains the nucleus in cells that are arrested in G1 phase.

p27 (Kip1)

P



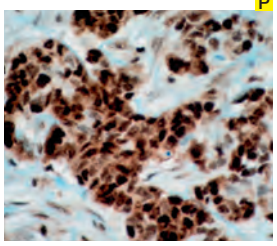
Breast tissue stained with Anti-p27/ Kip1 using AEC chromogen

Clone:	DCS72
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant rodent p27/ Kip1 antigen
Specificity:	p27 Kip1 antigen
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM396-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM396-10M**
Xmatrx®	**AX396-YCD, AX396-50D**
Concentrated:	**MU396-UC, MU396-5UC**
Recommended Positive Control:	**FG-396M**
Recommended Barrier Control:	**FB-396M**

The p27 Kip1 protein, also known as cyclin-dependent kinase inhibitor 1b (CDKN1B) or Kip1, is a putative tumor suppressor gene, regulator of drug resistance in solid tumors, and promoter of apoptosis. It acts as a safeguard against inflammatory injury and it has a role in cell differentiation. The p27 Kip1 protein is expressed in all normal tissues. The level of its expression has been observed to decrease during tumor development and progression in many tumors, including oral squamous cell carcinoma and in thyroid, colon, breast, prostate, and superficial bladder carcinomas. Overexpression of p27 Kip1 has been observed in a subset of aggressive B cell lymphomas.

p27/Kip1



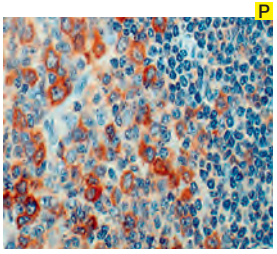
Breast cancer tissue stained with anti-Human p27/Kip1using DAB chromogen

Clone:	EP104
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in the C-terminus of of human p27/Kip1 protein
Specificity:	Human p27/Kip1
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN817-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN817-10M**
Xmatrx®	**AY817-YCD, AY817-50D**
Concentrated:	**NU817-UC, NU817-5UC**
Recommended Positive Control:	**FG-817N**
Recommended Barrier Control:	**FB-817N**

p27/Kip1 is a cyclin kinase inhibitor involved in G1 arrest. p27/Kip1 binds to and inhibits cyclinE-Cdk2 complex, cyclinA-CDK2 and cyclinD1-CDK4 (1). p27/Kip1 is regulated by phosphorylation on serine 10 (s10) and threonine 187 (T187). Phosphorylation by CDK2 on T187 results in ubiquitination and degradation of p27/Kip1, while phosphorylation by hKIS on S10 signals nuclear export to the cytoplasm. The expression level of p27/Kip1 is high in normal cells. Downregulation of p27/Kip1 is found in many types of cancers, and decreased expression of p27/Kip1 appears to be a poor prognostic factor in several tumor models, including carcinomas of the lung, breast, colorectal, and prostate.

p34cdc2 (Cyclin Dependent Kinase)



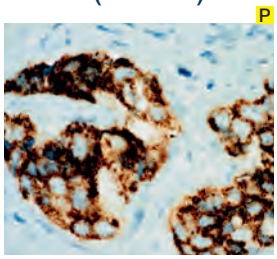
Tonsil tissue stained with Anti-p34cdc2 using DAB chromogen

Clone:	POH-1
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Recombinant human p34cdc2 fusion protein
Specificity:	p34cdc2 cyclin dependent kinase
Localization:	Nucleus & Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM301-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM301-10M**
Xmatrx®	**AX301-YCD, AX301-50D**
Concentrated:	**MU301-UC, MU301-5UC**
Recommended Positive Control:	**FG-301M**
Recommended Barrier Control:	**FB-301M**

p34cdc2 is a phosphoprotein with protein kinase activity that functions in the G2/M phase transition of the cell cycle. It is the catalytic subunit of the maturation-promoting factor (MPF) and forms a complex with both cyclin A and B in mammalian cells. Activated p34cdc2 kinase phosphorylates a variety of substrates leading to some specific events of mitosis including nuclear envelope break-down and chromosome condensation. It has also been implicated in lymphoid proliferation. This antibody stains p34cdc2 cyclin dependent kinase in nucleus and cytoplasm of proliferating cells and tumor cells and cross-reacts with skeletal muscle cells.

P504S (AMACR)



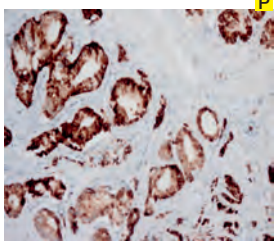
Prostate carcinoma stained with Anti-P504S antibody using DAB chromogen

Clone:	13H4
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human AMACR polypeptide
Specificity:	P504S
Localization:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN449-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN449-10ME**
Xmatrx®	**AY449-YCDE, AY449-50DE**
Concentrated:	**NU449-UCE, NU449-5UCE**
Recommended Positive Control:	**FG-449NE**
Recommended Barrier Control:	**FB-449NE**

P504S is a gene that encodes a protein Alpha-Methylacyl-CoA Racemase that is involved in the metabolism of branched-chain fatty acid and bile acid intermediates. P504S antibody stains human Alpha Methylacyl CoA Racemase in the cytoplasm of target prostatic cells.

P504S (AMACR)



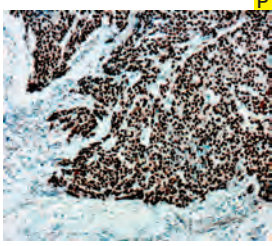
Prostate carcinoma stained with Rabbit Anti- P504S / AMACR using DAB as chromogen

Clone:	RBT-AMACR
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human P504S
Specificity:	P504S/AMACR
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN538-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN538-10M**
Xmatrx®	**AX538-YCD, AX538-50D**
Concentrated:	**NU538-UC, NU538-5UC**
Recommended Positive Control:	**FG-538N**
Recommended Barrier Control:	**FB-538N**

AMACR has been recently described as a prostate cancer-specific gene that encodes a protein involved in the beta-oxidation of branched chain fatty acids. High expression of AMACR (P504S) protein is usually found in prostatic adenocarcinoma but not in benign prostatic tissue by immunohistochemical staining in paraffin-embedded tissues. It stains premalignant lesions of prostate: high grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. Using AMACR (P504S) as a positive marker along with basal cell staining (34 beta E12 or p63) as a negative marker could help to confirm the diagnosis of small focus of prostate carcinoma on needle biopsies.

p53



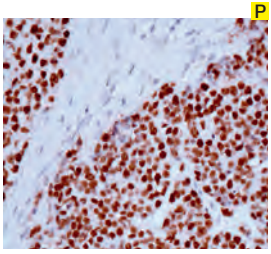
Breast Ca. stained with anti-P53

Clone:	EP9
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to N-terminal residues of human p53 protein
Specificity:	Human p53 protein
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN728-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN728-10M**
Xmatrx®	**AY728-YCD, AY728-50D**
Concentrated:	**NU728-UC, NU728-5UC**
Recommended Positive Control:	**FG-728N**
Recommended Barrier Control:	**FB-728N**

Tumor protein p53, a nuclear protein, plays an essential role in the regulation of cell cycles, specifically in the transition from G0 to G1. It is found in very low levels in normal cells, and it functions as a tumor suppressor within a variety of tumors by either stimulating apoptosis or growth arrest in deference to cell type and physiological factors. p53 is overexpressed in over 50% of human cancers. Positive staining of p53 detected by immunohistochemistry has been observed in colon cancer, breast cancer, lung cancer, prostate cancer and ovary cancer.

p53 Protein



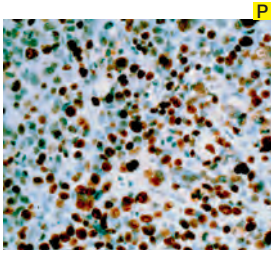
Breast carcinoma stained with Anti-p53 using DAB chromogen

Clone:	BP53-12-1
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Recombinant human wild-type p53 protein
Specificity:	p53 protein
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM195-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM195-10M**
Xmatrx®	**AX195-YCD, AX195-50D**
Concentrated:	**MU195-UC, MU195-5UC**
Recommended Positive Control:	**FG-195M**
Recommended Barrier Control:	**FB-195M**

p53 is a tumor suppressor gene product identified in a wide variety of tumors. p53 protein is present in low concentration in normal cells, but elevated levels of mutant p53 have been found in many common cancers. Accumulation of mutant p53 detected by immunohistochemical staining has been reported in breast, lung, colon, stomach, bladder, and testis carcinomas, soft-tissue sarcomas, and melanomas. This antibody stains positive in nucleus of a variety of tumor cells.

p53 Protein



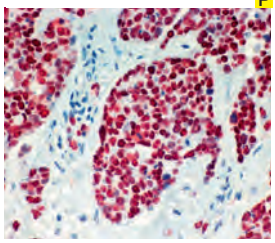
Breast carcinoma stained with Anti-p53 using DAB chromogen

Clone:	DO7
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Recombinant wild-type p53 protein
Specificity:	p53 protein
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM239-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM239-10M**
Xmatrx®	**AX239-YCD, AX239-50D**
Concentrated:	**MU239-UC, MU239-5UC**
Recommended Positive Control:	**FG-239M**
Recommended Barrier Control:	**FB-239M**

p53 is a tumor suppressor gene product identified in a wide variety of tumors. p53 protein is present in low concentration in normal cells, but elevated levels of mutant p53 have been found in many common cancers. Accumulation of mutant p53 detected by immunohistochemical staining has been reported in breast, lung, colon, stomach, bladder, and testis carcinomas, soft-tissue sarcomas, and melanomas. This antibody stains positive in nucleus of a variety of tumor cells.

p53 Protein



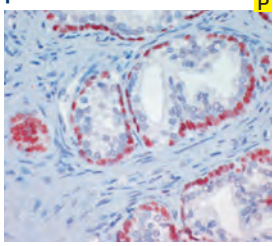
Breast carcinoma stained with Anti-p53 using DAB chromogen

Clone:	1801
Isotype:	IgG1
Source:	Mouse
Immunogen:	Fusion proteins of human p53 with β-galactosidase
Specificity:	p53 protein
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM240-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM240-10M**
Xmatrx®	**AX240-YCD, AX240-50D**
Concentrated:	**MU240-UC, MU240-5UC**
Recommended Positive Control:	**FG-240M**
Recommended Barrier Control:	**FB-240M**

p53 is a tumor suppressor gene product identified in a wide variety of tumors. p53 protein is present in low concentrations in normal cells, but elevated levels of mutant p53 have been found in many common cancers. Accumulation of mutant p53 detected by immunohistochemical staining has been reported in breast, lung, colon, stomach, bladder, and testis carcinomas, soft-tissue sarcomas, and melanomas. This antibody stains both wild-type and mutant human p53 protein primarily in the nucleus of positive cells.

p63



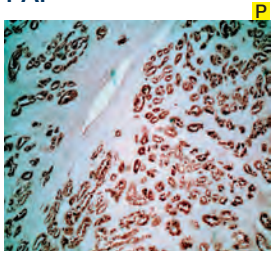
Prostate tissue stained with Anti-p63 using AEC chromogen

Clone:	4A4
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Amino terminal fragment of the delta Np63 isoform
Specificity:	p63
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000™:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM418-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM418-10M**
Xmatrx®	**AX418-YCD, AX418-50D**
Concentrated:	**MU418-UC, MU418-5UC**
Recommended Positive Control:	**FG-418M**
Recommended Barrier Control:	**FB-418M**

This antibody will detect all isoforms of p63 since the epitope is within the DNA binding domain. The p63 protein is a member of the p53 family, which also includes p73. p63 protein is detected in proliferating cells of epithelium, cervix, urothelium and prostate.

PAP



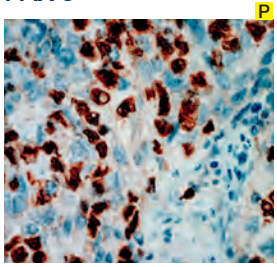
Prostate Carcinoma stained with Anti-PAP using DAB chromogen

Clone:	A40010
Isotype:	IgG1
Source:	Mouse
Immunogen:	PAP purified from seminal fluid
Specificity:	PAP
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM532-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM532-10M**
Xmatrx®	**AX532-YCD, AX532-50D**
Concentrated:	**MU532-UC, MU532-5UC**
Recommended Positive Control:	**FG-532M**
Recommended Barrier Control:	**FB-532M**

Prostate acid phosphatase (PAP) is a 100 kD glycoprotein present in high concentration in the prostate gland and its secretions. PAP is measured clinically because its level often rises in the serum in cases of prostatic carcinoma. By immunohistochemical analysis PAP has been found concentrated within the large secretory vacuoles of the supra nuclear portion of the prostatic columnar epithelial cell. In hyperplastic prostates and in benign prostatic tissue adjacent to the prostatic carcinoma, PAP activity is limited to the acinar or ductal columnar epithelial cells and adjacent luminal content. PAP reactivity in an extraprostatic tumor is an accurate and sensitive indicator of metastatic prostatic carcinoma.

PAX-5



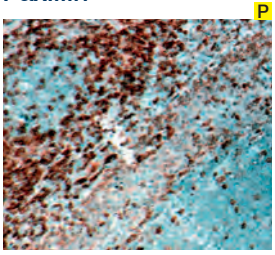
B cell showing PAX-5 positivity in a reactive lymph node stained using DAB chromogen

Clone:	ZP007
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human PAX-5
Specificity:	PAX-5 antigen
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM457-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM457-10M**
Xmatrx®	**AX457-YCD, AX457-50D**
Concentrated:	**MU457-UC, MU457-5UC**
Recommended Positive Control:	**FG-457M**
Recommended Barrier Control:	**FB-457M**

The PAX-5 gene is a member of the paired box (PAX) family of transcription factors. The central feature of this gene family is a novel, highly conserved DNA-binding motif, known as the paired box. The PAX proteins are important regulators in early development, and alterations in the expression of their genes are thought to contribute to neoplastic transformation. The PAX-5 gene encodes the B-cell lineage specific activator protein (BSAP) that is expressed at early, but not late stages of B-cell differentiation. Its expression has also been detected in developing CNS and testis, therefore, PAX-5 gene product may not only play an important role in B-cell differentiation, but also in neural development and spermatogenesis.

Paxillin



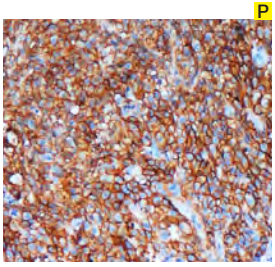
Tonsil stained with anti-Human Paxillin using DAB chromogen

Clone:	EP89
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in N-terminus of human
Specificity:	Human Paxillin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN876-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN876-10M**
Concentrated:	**NU876-UC, NU876-5UC**
Recommended Positive Control:	**FG-876N**
Recommended Barrier Control:	**FB-876N**

Paxillin is a cytoskeletal protein involved in actin-membrane attachment at sites of cell adhesion to the extracellular matrix (focal adhesion). It is a multidomain protein. The C-terminal region of paxillin contains four LIM domains that target paxillin to focal adhesions, presumably through a direct association with the cytoplasmic tail of beta-integrin. The N-terminus of paxillin controls most of its signaling activity. The proteins that bind to paxillin are diverse and include protein tyrosine kinases, such as Src and FAK, structural proteins, such as vinculin and actopaxin, and regulators of actin organization, such as COOL/PIX and PKL/GIT. Paxillin is widely expressed in epithelial cells of various tissues, neuronal cells and mesenchymal derived cells. An antibody to Paxillin is helpful in differentiating between renal cell carcinoma (Paxillin negative) and chromophobe renal cell carcinoma or renal oncocytoma (Paxillin positive) , which are rare renal tumors originating from the intercalated cells of collecting ducts. Paxillin has been reported to be involved in tumor invasion and metastasis. Its expression in lung and liver cancers has been correlated with advanced tumor stage and metastasis.

PD-L1



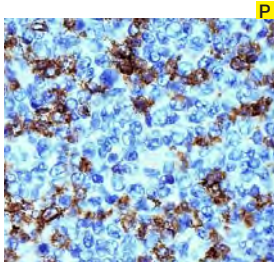
Lung tissue stained with PD-L1 showing membrane staining

Clone:	IHC411
Isotype:	-
Source:	Rabbit
Immunogen:	Full length human PD-L1
Specificity:	PD-L1
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN921-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN921-10M**
Xmatrx®	**AX921-50D, AX921-YCD**
Concentrated:	**NU921-UC, NU921-5UC**
Recommended Positive Control:	**FG-921M**
Recommended Barrier Control:	**FB-921M**

PD-L1 (Programmed death ligand 1) or cluster of differentiation 274 (CD274) or B7 homolog 1 (B7-H1) is immunoglobulin-like type I transmembrane glycoprotein that act as a ligand for programmed death 1 (PD-1). PD-L1 expression is seen on T cells, B cells, dendritic cells, and monocytes. It is critical factor in infection and disease progression of human immunodeficiency virus, sepsis, and tuberculosis. PD-L1 upon interaction with its receptor PD-1, delivers inhibitory signals to activated B cells and T cells, and thus helps to maintain the balance between effective immunity, tolerance and immunopathology. Overexpression of PD-L1 may allow cancer cells to evade the actions of the host immune system.

PD-1



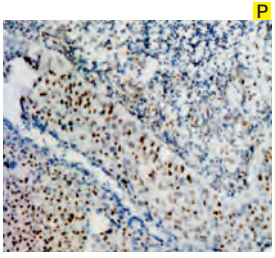
Lymph node stained with PD-1

Clone:	IHC001
Isotype:	-
Source:	Mouse
Immunogen:	PD-1
Specificity:	PD-1
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM922-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM922-10M**
Xmatrx®	**AX922-50D, AX922-YCD**
Concentrated:	**MU922-UC, MU922-5UC**
Recommended Positive Control:	**FG-922M**
Recommended Barrier Control:	**FB-922M**

PD-1, also known as programmed cell death protein 1 or CD279 (cluster of differentiation 279), is a cell surface receptor that belongs to the CD28 immunoglobulin super family and is expressed on T cells and pro-B cells. Studies have shown that PD-1/PD-L interaction function as an immune checkpoint for induction and maintenance of T-cells involved in peripheral tolerance and protects tissues from autoimmune attack. PD-1 down regulates the immune system which in turn reduces autoimmunity and promotes self-tolerance. PD-1 performs dual mechanism of promoting apoptosis (programmed cell death) in self antigen specific T-cells in lymph nodes at the same time inhibiting apoptosis in regulatory T cells (suppressor T cells).

Papillomavirus Type 16 (HPV-16)



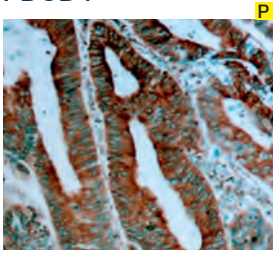
HPV infected tissue stained with Anti-HPV 16 using DAB chromogen

Clone:	Cam Vir-1
Isotype:	IgG 2a
Source:	Mouse
Immunogen:	Recombinant HPV-16 protein
Specificity:	HPV16
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM362-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM362-10ME**
Xmatrx®	**AX362-YCDE, AX362-50DE**
Concentrated:	**MU362-UCE, MU362-5UCE**
Recommended Positive Control:	**FG-362ME**
Recommended Barrier Control:	**FB-362ME**

This antibody stains Papillomarvirus type 16 in the nucleus of infected cells or tissues stained by immunohistochemical techniques.

PDCD4



Colon cancer stained with anti-Human PDCD4 using DAB chromogen

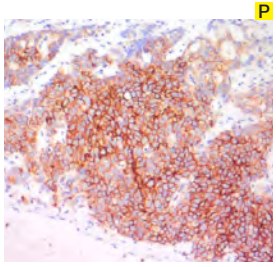
Clone:	EP102
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues near the N-terminus of human PDCD4 protein
Specificity:	Human PDCD4
Localization:	Cytoplasm/Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN875-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN875-10M**
Xmatrx®	**AY875-YCD, AY875-50D**
Concentrated:	**NU875-UC, NU875-5UC**
Recommended Positive Control:	**FG-875N**
Recommended Barrier Control:	**FB-875N**

Programmed cell death protein 4 (PDCD4) was initially identified as a differentially expressed protein during apoptosis. It acts as a tumor suppressor that inhibits tumor promoter-induced neoplastic transformation. It down-regulates the expression of MAP4K1, thus inhibiting events important in driving invasion, namely, MAPK85 activation and consequent JUN-dependent transcription. PDCD4 expression has been found in both normal and tumor cells. Reduced expression of PDCD4 is frequently observed in tumors. Loss of PDCD4 expression has been correlated with tumor progression and prognosis in cancers of the lung, ovary, pancreas and esophagus. Nuclear expression of PDCD4 was associated with a longer disease-free and overall survival rate of esophageal cancer.

P-Tyr

P



Prostate cancer stained with p-Tyr

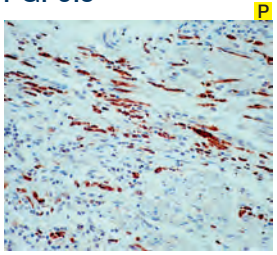
Clone:	PY793
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Phosphotyrosine conjugated to BSA
Specificity:	P-Tyr
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM938-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM938-10ME**
Xmatrx®	**AX938-50DE, AX938-YCDE**
Concentrated:	**MU938-UCE, MU938-5UCE**
Recommended Positive Control:	**FG-938ME**
Recommended Barrier Control:	**FB-938ME**

Protein phosphorylation is a fundamental event in the regulation of a large number of intracellular processes. Phosphorylation of specific tyrosine residues is the result of activation or stimulation of their respective protein tyrosine kinases. The phosphorylated proteins can be auto-phosphorylated kinases or certain cellular protein substrates. Tyrosine-phosphorylated proteins are involved in signal transduction and in the regulation of cell proliferation. Antibody to phosphotyrosine provides an excellent tool for the detection, characterization, and purification of phosphotyrosine containing proteins. Anti-P-Tyr monoclonal shows no cross-reaction with other phosphoamino acids and is used in multiple applications including staining of formalin/paraffin tissues.

PGP9.5

P



Small intestine stained with anti-PGP9.5

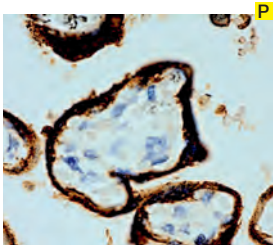
Clone:	3D9
Isotype:	IgG2a kappa
Source:	Mouse
Immunogen:	PGP9.5 antibody was raised in mouse using recombinant human PGP9.5 (1-223aa) purified from *E. coli* as the immunogen
Specificity:	Human PGP9.5
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM736-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM736-10ME**
Xmatrx®	**AX736-YCDE, AX736-50DE**
Concentrated:	**MU736-UCE, MU736-5UCE**
Recommended Positive Control:	**FG-736ME**
Recommended Barrier Control:	**FB-736ME**

PGP9.5/UCH-L1 is a member of a gene family whose products hydrolyze small C-terminal adducts of ubiquitin to generate the ubiquitin monomer. PGP9.5 is a component of the ubiquitin system, which has value as a marker for neurons and may be of particular use in the study of ubiquitinated cellular inclusions characteristic of several chronic human neurodegenerative diseases. A fundamental role in regulating various biological activities, the PGP9.5 gene encodes two opposing enzymatic activities that affect alpha-synuclein degradation and Parkinson's disease susceptibility.

Placental Alkaline Phosphatase (PLAP)

P



Placenta tissue stained with anti-PLAP using DAB chromogen

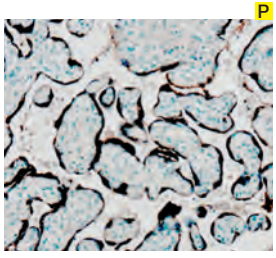
Clone:	PL8-F6
Isotype:	IgG
Source:	Mouse
Immunogen:	Purified human placental alkaline phosphatase
Specificity:	Placental alkaline phosphatase
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM228-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM228-10M**
Xmatrx®	**AX228-YCD, AX228-50D**
Concentrated:	**MU228-UC, MU228-5UC**
Recommended Positive Control:	**FG-228M**
Recommended Barrier Control:	**FB-228M**

Human Placental Alkaline Phosphatase (PLAP), a 60-70 kD oncofetal antigen, is a member of a family of membrane bound alkaline phosphatase enzymes and isoenzymes. PLAP and/or PLAP-like isoenzymes have been found to be expressed by malignant tumors of germ cell and non-germ cell origin. The antibody reacts with PLAP in syncytiotrophoblasts in placenta and also reacts with human germ cell tumors. This antibody stains positive in the cytoplasmic membrane and cytoplasm of positive cells.

Placental Lactogen (hPL)

P



Placenta tissue stained with Anti-Hpl using DAB chromogen

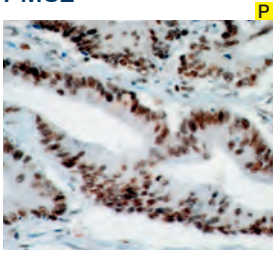
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Human placental lactogen purified from human urine
Specificity:	Human Placental Lactogen (hPL)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR040-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR040-10R**
Xmatrx®	**AW040-YCD, AW040-50D**
Concentrated:	**PU040-UP, PU040-5UP**
Recommended Positive Control:	**FG-040P**
Recommended Barrier Control:	**FB-040P**

Human Placental Lactogen (hPL) can be demonstrated in human placental tissue and in the serum of pregnant women. Human placental lactogen has been identified in some breast carcinomas and in trophoblastic and nontrophoblastic tumors of the placenta, and has been used as a serum or tissue marker for trophoblastic and nontrophoblastic neoplasms. This antibody stains hPL in cytoplasm of trophoblast and other positive cells.

PMS2

P



Colon cancer tissue stained with anti-Human PMS2 using DAB chromogen

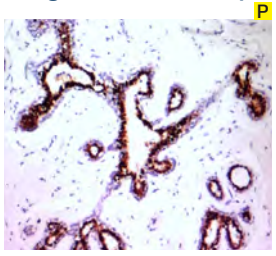
Clone:	EP51
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human PMS2 protein
Specificity:	Human PMS2
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN844-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN844-10ME**
Xmatrx®	**AY844-YCDE, AY844-50DE**
Concentrated:	**NU844-UCE, NU844-5UCE**
Recommended Positive Control:	**FG-844NE**
Recommended Barrier Control:	**FB-844NE**

PMS2, a mismatch repair endonuclease, is a member of a family of genes involved in DNA mismatch repair. Carriers of the mismatch repair gene mutations have a high lifetime risk of developing Hereditary Non-Polyposis Colon Cancer (HNPCC) and several other cancers including endometrial cancer due to microsatellite instability (MSI) caused by accumulation of DNA replication errors in proliferating cells. Along with MLH1, MSH2 and MSH6, PMS2 antibody is helpful in diagnosis of MSI. An IHC study conducted by Mayo clinic on 535 cases with MSI high, 90% of the tumors showed loss of MLH1, MSH2 and/or MSH6 expression, while 70% of the remaining cases showed isolated loss of PMS2 expression. The loss of PMS2 was associated with young age of diagnosis and right-sided location but not with a striking family history of cancer. Endometrial carcinomas are the most common non-colorectal cancers that occur in HNPCC. The most common IHC abnormality in endometrial carcinomas with MSI was concurrent loss of MLH1/PMS2. Adding of PMS2 and MSH6 to MLH1 and MSH2 antibodies increased sensitivity for diagnosis of MSI. Tumors with low-level MSI show unfavorable pathological characteristics compared to tumors with no and tumors with high-level MSI.

Progesterone Receptor

P



Breast carcinoma stained with Anti-PR using DAB chromogen

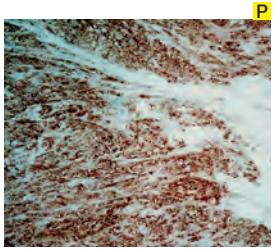
Clone:	EP2
Isotype:	IgG
Source:	Rabbit
Immunogen:	Purified human progesterone receptor protein
Specificity:	Progesterone Receptor
Localization:	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN711-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AN711-10ME**
Xmatrx®	**AY711-YCDE, AY711-50DE**
Concentrated:	**NU711-UCE, NU711-5UCE**
Recommended Positive Control:	**FG-711NE**
Recommended Barrier Control:	**FB-711NE**

The human progesterone receptor (PR), is a ligand-activated transcription factor and is a member of the steroid receptor family. PR exists in human as two isoforms; PR-A (94 kD) which lacks the first 164 amino acids of PR-B and PR-B(114 kD).This anti-PR recognizes both PR-A and B. It labels epithelial cells of breast, ovary and endometrium. This antibody stains human progesterone receptor in tissue sections by immunohistochemical techniques.

Platelet-Derived Growth Factor (PDGF)

P



Squamous cell carcinoma stained with Anti-PDGF using AEC chromogen

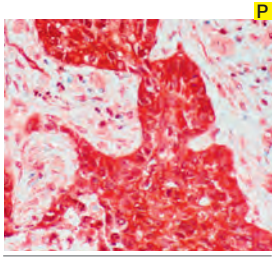
Clone:	PDGF88
Isotype:	IgM
Source:	Mouse
Immunogen:	Synthetic peptide of PDGF-B conjugated to keyhole limpet hemocyanin
Specificity:	PDGF-B
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM376-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM376-10M**
Xmatrx®	**AX376-YCD, AX376-50D**
Concentrated:	**MU376-UC, MU376-5UC**
Recommended Positive Control:	**FG-376P**
Recommended Barrier Control:	**FB-376P**

PDGF is one of the major factors activated in wound healing and revascularization and may play an important role as an endogenous promoter in epithelial tumor foundation. PDGF can lead to excessive production of extracellular matrix components including various collagens, proteoglycans, and laminin. The development of specific subsets of smooth muscle cells depends on PDGF. PDGF is one of the most potent activators of stromal cells. PDGFR is a prime candidate to mediate proliferation and migration responses of mesangial injury in glomerular disease. This monoclonal antibody stains PDGF in cytoplasm of positive cells.

Platelet-Derived Growth Factor (PDGF)

P



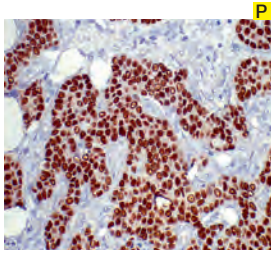
Squamous cell carcinoma stained with Anti-PDGF using AEC chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Synthetic peptide based on PDGF-B sequence that shares high homology with PDGF-A forms
Specificity:	PDGF
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR376-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR376-10R**
Xmatrx®	**AW376-YCD, AW376-50D**
Concentrated:	**PU376-UP, PU376-5UP**
Recommended Positive Control:	**FG-376M**
Recommended Barrier Control:	**FB-376M**

PDGF is one of the major factors activated in wound healing and may play an important role as an endogenous promoter in epithelial tumor foundation. PDGF can lead to excessive production of extracellular matrix components including various collagens, proteoglycans, and laminin. PDGF is one of the most potent activators of stromal cells. Proliferation and migration are important responses of mesangial cell injury. PDGFR is a prime candidate to mediate these responses in glomerular disease. PDGF and PDGFR are upregulated in the mesangium during glomerular injury. The monoclonal antibody to PDGF-B has been studied for its potential clinical utility in wound healing and revascularization. This epitope-specific antibody stains PDGF in cytoplasm of positive cells.

Progesterone Receptor



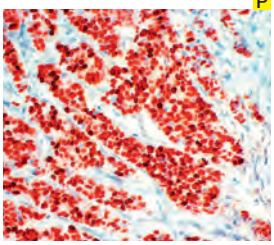
Breast carcinoma stained with Anti-PR using DAB chromogen

Clone:	1A6
Isotype:	IgG1
Source:	Mouse
Immunogen:	Synthetic peptide of progesterone receptor
Specificity:	Progesterone Receptor
Localization:	Nuclear
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM172-2ME, AM172-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM172-10ME**
Xmatrx®	**AX172-YCDE**
Concentrated:	**MU172-UCE, MU172-5UCE**
Recommended Positive Control:	**FG-172ME**
Recommended Barrier Control:	**FB-172ME**

This antibody stains human nuclear progesterone receptor in tissue sections by immunohistochemical techniques.

Progesterone Receptor (InSite® PR)



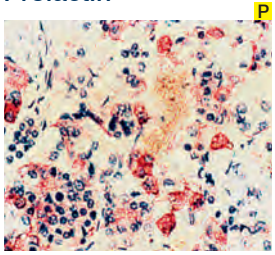
Progesterone Receptor on breast carcinoma showing strong nuclear positivity using AEC chromogen

Clone:	PR88
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Purified human progesterone receptor protein
Specificity:	Progesterone Receptor
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM328-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM328-10ME**
Xmatrx®	**AX328-YCDE, AX328-50DE**
Concentrated:	**MU328-UCE, MU328-5UCE**
Recommended Positive Control:	**FG-328ME**
Recommended Barrier Control:	**FB-328ME**

The use of monoclonal antibodies to determine Progesterone Receptor status increases the predictive value of immunohistochemical analysis with respect to the response of human tumors to hormonal modulation. Historically, estrogen receptor-positive/progesterone receptor-positive breast carcinoma patients have demonstrated a better response to endocrine therapy than estrogen receptor-positive/ progesterone receptor-negative patients. This antibody stains positive in nucleus of the receptor positive cells.

Prolactin



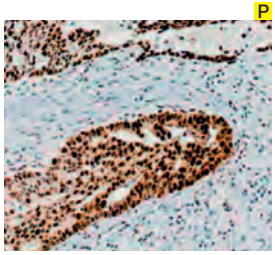
Pituitary gland stained with Anti-Prolactin using DAB chromogen

Clone:	ME-121
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human Prolactin
Specificity:	Prolactin
Localization:	Cytoplasm/Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM031-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM031-10M**
Xmatrx®	**AX031-YCD, AX031-50D**
Concentrated:	**MU031-UC, MU031-5UC**
Recommended Positive Control:	**FG-031M**
Recommended Barrier Control:	**FB-031M**

Malignant pituitary adenomas or pituitary carcinomas arise from and consist of adenohypophysial cells. They can produce various hormones such as ACTH, Growth hormone, TSH, FSH, LH and Prolactin. Tumors that do not consist of adenohypophysial cells neither produce nor contain pituitary hormone, and thus immuno-peroxidase techniques are helpful in distinguishing from those pituitary tumors that store various hormones in the cell cytoplasm.

Proliferating Cell Nuclear Antigen (PCNA)



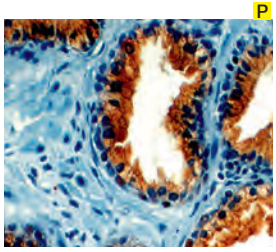
PCNA positivity in Breast carcinoma stained using DAB chromogen

Clone:	PC10
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Rat PCNA synthesized with the protein A expression vector pR1T2T
Specificity:	PCNA
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM252-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM252-10M**
Xmatrx®	**AX252-YCD, AX252-50D**
Concentrated:	**MU252-UC, MU252-5UC**
Recommended Positive Control:	**FG-252M**
Recommended Barrier Control:	**FB-252M**

PCNA, also known as cyclin, is a 36 kD nonhistone nuclear protein that plays a fundamental role in the initiation of cell proliferation. PCNA is a cell cycle-regulated protein that preferentially occurs in dividing cells and is undetectable or present in small amounts in resting cells. Immunoperoxidase staining for PCNA in benign tissues has revealed positive nuclear staining in normal colonic crypt epithelium, gastric glandular cells, germinal center cells of lymph node, basal cells of skin, and renal tubular epithelial cells. The monoclonal antibody to PCNA might be an acceptable alternative to Ki-67 labeling in routinely processed tissues. This antibody stains PCNA in the nucleus of proliferating cells.

Prostate Specific Acid Phosphatase (PSAP)



Prostate tissue stained with Anti-PSAP using DAB chromogen

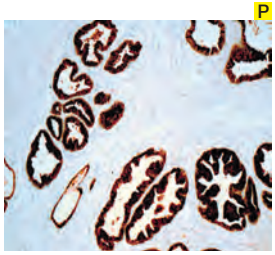
Clone:	B01-94-21M-NA
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	Partially purified prostate acid phosphatase from human seminal plasma
Specificity:	Prostate Specific Acid Phosphatase (PSAP)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM013-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM013-10ME**
Xmatrx®	**AX013-YCDE, AX013-50DE**
Concentrated:	**MU013-UCE, MU013-5UCE**
Recommended Positive Control:	**FG-013ME**
Recommended Barrier Control:	**FB-013ME**

RUO

Prostate specific acid phosphatase (PSAP) is a 100 kD glycoprotein present in high concentration in the prostate gland and its secretions. PSAP is measured clinically because its level often rises in the serum in cases of prostatic carcinoma. By immunohistochemical analysis PSAP has been found concentrated within the large secretory vacuoles of the supranuclear portion of the prostatic columnar epithelial cell. In hyperplastic prostates and in benign prostatic tissue adjacent to the prostatic carcinoma, PSAP activity is limited to the acinar or ductal columnar epithelial cells and adjacent luminal content.

Prostate Specific Antigen (PSA)



Prostate tissue stained with Anti-PSA using DAB chromogen

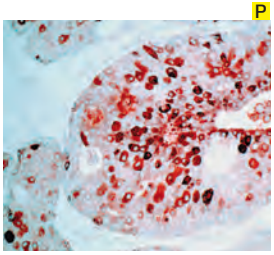
Clone:	ErPr-8
Isotype:	IgG1
Source:	Mouse
Immunogen:	Affinity purified prostate specific antigen
Specificity:	Prostate specific antigen (PSA)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM014-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM014-10ME**
Xmatrx®	**AX014-YCDE, AX014-50DE**
Concentrated:	**MU014-UCE, MU014-5UCE**
Recommended Positive Control:	**FG-014ME**
Recommended Barrier Control:	**FB-014ME**

RUO

PSA is a glycoprotein with a molecular mass of 33-34 kD. Clone ErPr8 is directed against a 35 kD protein identical to PSA. PSA is biochemically and immunologically distinct from prostatic acid phosphatase. It is restricted to the cytoplasm of acinar and ductal epithelia of normal, benign or malignant prostate tissue. This antibody is useful for determining if an isolated metastasis is of prostatic origin. Since PSA is released by prostatic tumors, it is also a valuable serum marker of neoplasia.

pS2 Estrogen Inducible Protein



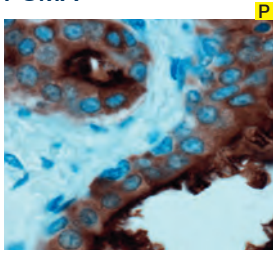
Breast carcinoma stained with Anti-pS2 estrogen inducible protein using Fast Red chromogen

Clone:	PS2.1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Synthetic peptide of 31 amino acid residues from the C-terminus of human pS2 protein
Specificity:	pS2 protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM190-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM190-10M**
Xmatrx®	**AX190-YCD, AX190-50D**
Concentrated:	**MU190-UC, MU190-5UC**
Recommended Positive Control:	**FG-190M**
Recommended Barrier Control:	**FB-190M**

This antibody specifically recognizes 6.5 kD human pS2 estrogen-regulated protein (6.5 kD). pS2 is specifically expressed and secreted by ER-mucosa cells of the normal stomach (antrum and body) of both female and male individuals. Primary breast tumors have been shown to express pS2 in ER+primary breast tumors. This antibody shows a predominantly cytoplasmic localization of pS2 protein.

PSMA



Prostate stained with anti-Human PSMA using DAB chromogen

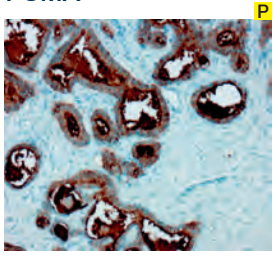
Clone:	SP29
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from the C-terminus of human PSMA.
Specificity:	Human PSMA
Localization:	Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN768-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN768-10M**
Xmatrx®	**AY768-YCD, AY768-50D**
Concentrated:	**NU768-UC, NU768-5UC**
Recommended Positive Control:	**FG-768N**
Recommended Barrier Control:	**FB-768N**

Prostate Specific Membrane Antigen (PSMA) is a surface glycoprotein with restricted expression to normal prostate tissue, primary and metastatic prostate cancer and the neovasculature of various nonprostatic epithelial malignancies. Overexpression of PSMA is correlated with high tumor grade, non-diploid tumors, and advanced tumor stage. Even though PSA is useful in identifying the prostate origin of cancers, PSMA shows moderate to strong positivity in one-half of the cells per case that show relatively poor PSA staining, and is excellent in differentiating between prostatic adenocarcinoma and urothelial carcinoma. PSMA expression is highly restricted to the prostate. It is a useful marker for prostate tumors. In prostate cancer, overexpression of PSMA is correlated with high tumor grade, non-diploid tumors, and advanced tumor stage .It can be used as an effective predictor for tumor progression in prostate cancer.

PSMA

P



Prostate stained with anti-PSMA

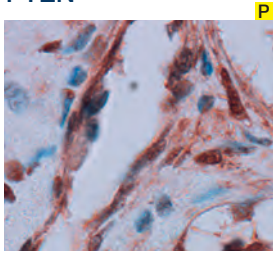
Clone:	EP192
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human PSMA protein
Specificity:	PSMA protein
Localization:	Membrane/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN714-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN714-10M**
Xmatrx®	**AY714-YCD, AY714-50D**
Concentrated:	**NU714-UC, NU714-5UC**
Recommended Positive Control:	**FG-714N**
Recommended Barrier Control:	**FB-714N**

Prostate-specific membrane antigen (PSMA), also known as folate hydrolase 1 (FOLH1), is a type II transmembrane glycoprotein belonging to the M28 peptidase family. PSMA has two enzymatic activities, one as a prostate-specific integral membrane folate hydrolase and the other as a carboxypeptidase. An antibody to PSMA labels normal prostate epithelial cells and prostate tumor cells. Although the expression of PSMA in neovasculature of a variety of solid tumors has been reported, it is a useful marker for prostate tumors. In prostate cancer, overexpression of PSMA is correlated with high tumor grade, non-diploid tumors and advanced tumor state. It can be used as an effective predictor for tumor progression in prostate cancer.

PTEN

P



Prostate stained with anti-Human PTEN using DAB chromogen

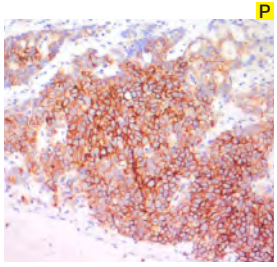
Clone:	SP218
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide derived from the C-terminus of human PTEN protein
Specificity:	Human PTEN
Localization:	Membrane, cytoplasm, and nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN746-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN746-10M**
Xmatrx®	**AY746-YCD, AY746-50D**
Concentrated:	**NU746-UC, NU746-5UC**
Recommended Positive Control:	**FG-746N**
Recommended Barrier Control:	**FB-746N**

Phosphatidylinositol-3, 4, 5-trisphosphate 3-phosphatase and dual specificity protein phosphatase (PTEN) is a tumor suppressor and a member in the PI3K/PTEN/Akt pathway. It contains a tensin like domain as well as a catalytic domain similar to that of the dual specificity protein tyrosine phosphatases. Unlike most of the protein tyrosine phosphatases, this protein preferentially dephosphorylates phosphoinositide substrates. The defects of PTEN have been implicated in human cancers from breast, prostate, thyroid, skin, endometrium, head and neck, and brain. Up to 50-60 percent of advanced prostate cancers show abnormal PTEN gene expression or loss of protein expression.

P-Tyr

P



Prostate cancer stained with p-Tyr

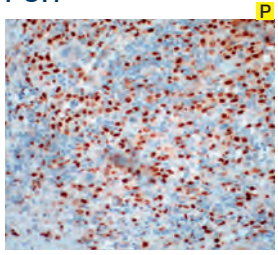
Clone:	PY793
Isotype:	IgG2b
Source:	Mouse
Immunogen:	Phosphotyrosine conjugated to BSA
Specificity:	P-Tyr
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM938-5ME**
Ready-to-Use (Automated):	
***i*6000™**	**AM938-10ME**
Xmatrx®	**AX938-50DE, AX938-YCDE**
Concentrated:	**MU938-UCE, MU938-5UCE**
Recommended Positive Control:	**FG-938ME**
Recommended Barrier Control:	**FB-938ME**

Protein phosphorylation is a fundamental event in the regulation of a large number of intracellular processes. Phosphorylation of specific tyrosine residues is the result of activation or stimulation of their respective protein tyrosine kinases. The phosphorylated proteins can be auto-phosphorylated kinases or certain cellular protein substrates. Tyrosine-phosphorylated proteins are involved in signal transduction and in the regulation of cell proliferation. Antibody to phosphotyrosine provides an excellent tool for the detection, characterization, and purification of phosphotyrosine containing proteins. Anti-P-Tyr monoclonal shows no cross-reaction with other phosphoamino acids and is used in multiple applications including staining of formalin/paraffin tissues.

PU.1

P



Lymphoma stained with anti-Human PU.1 using DAB chromogen

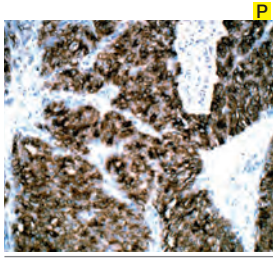
Clone:	EP18
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues near the N-terminus of human transcription factor PU.1 protein
Specificity:	Human PU.1
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN843-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN843-10M**
Xmatrx®	**AY843-YCD, AY843-50D**
Concentrated:	**NU843-UC, NU843-5UC**
Recommended Positive Control:	**FG-843N**
Recommended Barrier Control:	**FB-843N**

PU.1 is a member of the Ets family of transcription factors and is required for the development of multiple hematopoietic lineages. It plays a pivotal role in normal myeloid differentiation, and regulates the expression of immunoglobulin and other genes that are important for B cell development. PU.1 stains B lymphocyte in germinal center and mantle B cell, but not plasma cell. It labels many types of B cell lymphoma including mantle cell lymphoma, but it is not expressed in classical Hodgkin lymphoma (cHL). The lack of transcription factor PU.1 protein expression in cHL, a lympho proliferative disease of predominantly B-cell origin, likely contributes to the lack of immunoglobulin expression and incomplete B-cell phenotype characteristic of the Reed-Sternberg cells in cHL.

Renal Cell Carcinoma (RCC)

P



Renal Cell carcinoma stained with Anti-RCC using DAB chromogen

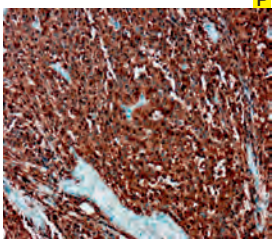
Clone:	RCC-26
Isotype:	IgG1/K
Source:	Mouse
Immunogen:	Human RCC
Specificity:	Renal Glycoprotein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	None

Ready-to-Use (Manual):	**AM543-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM543-10M**
Xmatrx®	**AX543-YCD, AX543-50D**
Concentrated:	**MU543-UC, MU543-5UC**
Recommended Positive Control:	**FG-543M**
Recommended Barrier Control:	**FB-543M**

Renal cell carcinoma, also known by a gurnistical tumor, is the most common form of kidney cancer arising from the renal tubule. RCC antibody recognizes a 200 kD glycoprotein localized in the brush border of the proximal renal tubule. It immunoreacts with approximately 90% of primary renal cell carcinomas and approximately 85% of metastatic renal cellcarcinomas. Other tumors that may react with this antibody are parathyroid adenoma, an occasional breast carcinoma. Nephroblastoma, oncocytoma, mesoblastic nephroma, transitional cell carcinoma, and angiomyolipoma are not labeled with this antibody

S100-β

P



Melanoma stained with anti-S100 beta antibody using DAB

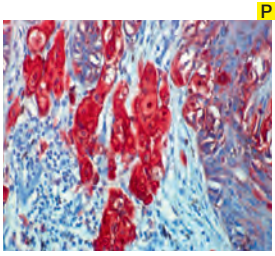
Clone:	EP32
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the C-terminus of human S100 Beta protein
Specificity:	S100 Beta protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN713-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN713-10M**
Xmatrx®	**AY713-YCD, AY713-50D**
Concentrated:	**NU713-UC, NU713-5UC**
Recommended Positive Control:	**FG-713N**
Recommended Barrier Control:	**FB-713N**

S100 belongs to the family of calcium binding proteins such as calmodulin and troponin C. S100 Beta is abundant in glial cells of the central and peripheral nervous system, in melanocytes, chondrocytes, and adipocytes. It also labels Langerhans cells, histiocytes, epithelial, myoepithelial cells and integrating reticular cells of lymphoid tissue, and tumors originated from these cells. S100 Beta is a useful marker for diagnosis of melanoma, tumors of nerves system.

S100 Protein

P



Melanoma stained with anti- S100 using AEC chromogen

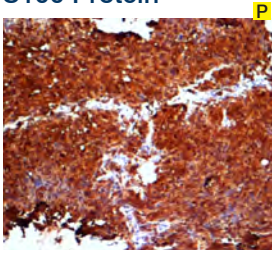
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	S-100 protein isolated polyclonal from bovine brain using affinity chromatography
Specificity:	S100 protein
Localization:	Cytoplasm & Nucleus
Tissue Type:	FFPE
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR058-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR058-10R**
Xmatrx®	**AW058-YCD, AW058-50D**
Concentrated:	**PU058-UP, PU058-5UP**
Recommended Positive Control:	**FG-058P**
Recommended Barrier Control:	**FB-058P**

S100 protein is a low molecular weight soluble protein first isolated from the brain and initially believed to be exclusively a glial marker. Two subunits of S100 protein have been identified. and they are differently expressed by various cells. the beta subunit is present in all S100 positive cells and tumors. In contrast, the alpha subunit is detectable only in neurons and lymph node macrophages. The presence of S100 protein is readily demonstrated in routinely processed malignant melanomas. S100 protein also has been found in normal melanocytes, Langerhans cells, histiocytes, chondrocytes, lipocytes, skeletal and cardiac muscle, Schwann cells, epithelial and myoepithelial cells of the breast, salivary and sweat glands, in addition to glial cells. Neoplasms derived from these cells also express S100 protein to varying degrees. A large proportion of well-differentiated tumors of salivary gland, adipose, cartilaginous tissue, and Schwann cell derived tumors express S100 protein.

S100 Protein

P



Melanoma stained with Anti-S100 using DAB chromogen

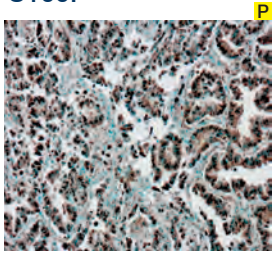
Clone:	15E2E2
Isotype:	IgG 2a Kappa
Source:	Mouse
Immunogen:	Purified bovine S-100 protein
Specificity:	S100 protein
Localization:	Cytoplasm & Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM058-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM058-10M**
Xmatrx®	**AX058-YCD, AX058-50D**
Concentrated:	**MU058-UC, MU058-5UC**
Recommended Positive Control:	**FG-058M**
Recommended Barrier Control:	**FB-058M**

S100 protein is a low molecular weight soluble protein first isolated from the brain and initially believed to be exclusively a glial marker. Two subunits of S100 protein have been identified. The beta subunit is present in all S100 positive cells and tumors. In contrast, the alpha subunit is detectable only in neurons and lymph node macrophages. The presence of S100 protein is readily demonstrated in routinely processed malignant melanomas. S100 protein has also been found in normal melanocytes, Langerhans cells, histiocytes, chondrocytes, lipocytes, skeletal and cardiac muscle, Schwann cells, epithelial and myoepithelial cells of the breast, salivary and sweat glands, in addition to glial cells. Neoplasms derived from these cells also express S100 protein to varying degrees. A large proportion of well-differentiated tumors of salivary gland, adipose, cartilaginous tissue, and Schwann cell-derived tumors express S100 protein.

S100P

P



Lung stained with anti-S100p

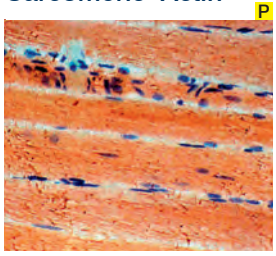
Clone:	EP186
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues of human S100P protein
Specificity:	S100P protein
Localization:	Cytoplasm/Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN712-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN712-10M**
Xmatrx®	**AY712-YCD, AY712-50D**
Concentrated:	**NU712-UC, NU712-5UC**
Recommended Positive Control:	**FG-712N**
Recommended Barrier Control:	**FB-712N**

S100P is a member of the S100 family of proteins. S100P is expressed in various normal tissues including placenta, bladder, spleen, gastric and intestinal mucosa. Overexpression of S100P has been detected in several cancers such as colon, prostate, pancreatic and lung carcinomas. It has been functionally implicated in carcinogenic processes. S100P is an early developmental marker of pancreatic carcinogenesis and can be used as a marker for pancreatic ductal adenocarcinoma. It may also serve as a predictor of distant metastasis and poor survival in non-small cell lung carcinomas.

Sarcomeric Actin

P



Muscle tissue stained with Anti-Sarcomeric Actin using DAB as chromogen

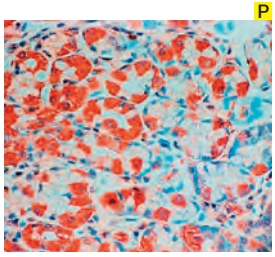
Clone:	ZMSA-5
Isotype:	IgG
Source:	Mouse
Immunogen:	Mouse anti-sarcomeric actin antibody is purified from mouse ascites.
Specificity:	Sarcomeric Actin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM511-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM511-10M**
Xmatrx®	**AX511-YCD, AX511-50D**
Concentrated:	**MU511-UC, MU511-5UC**
Recommended Positive Control:	**FG-511M**
Recommended Barrier Control:	**FB-511M**

Actin is a cytoskeletal protein that regulates cell motility, secretion, phagocytosis and cytokinesis. The NH2-terminal of actin may function as an antigen. This terminal may also modulate actin interactions and may associate with proteins such as myosin. This antibody is specific for alpha isoform of skeletal and cardiac muscle actin. This antibody shows wide cross reactivity to other tissues from human, sheep, rabbit, guinea pig, rat, frog and snake. However, it does not react with smooth muscle tissue.

Secretin

P



Stomach tissue stained with Anti-Secretin stained with AEC chromogen

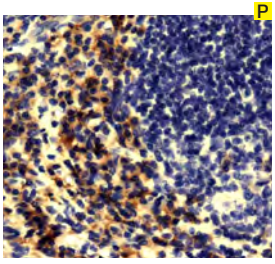
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Synthetic porcine secretin coupled to keyhole limpet hemocyanin with carbodiimide; conjugate emulsified in Freund's complete adjuvant prior to injection
Specificity:	Secretin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR067-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR067-10R**
Xmatrx®	**AW067-YCD, AW067-50D**
Recommended Positive Control:	**FG-067P**
Recommended Barrier Control:	**FB-067P**

This hormone, a polypeptide of 27 amino acids, which acts to stimulate pancreatic bicarbonate, is localized primarily in the gastrointestinal tract. It is released from secretin cells (S-cells) which have been localized within the antropyloric, duodenal, jejunal and ileal mucosa of human tissue. Hypersecretinemia has been observed in duodenal ulcers, Zollinger-Ellison syndrome, and chronic renal failure. This antibody stains Secretin in cellular elements in the epithelium of the gastrointestinal tract.

SLAMF7

P



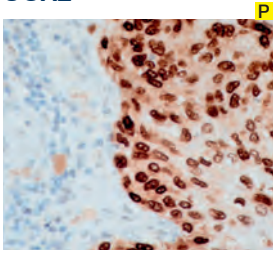
Tonsil stained with Anti-SLAMF7 using DAB chromogen

Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	SLAM family member 7
Specificity:	Human SLAMF7
Localization:	Cell Membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR920-5RE**
Ready-to-Use (Automated):	
***i*6000™**	**AR920-10RE**
Xmatrx®	**AW920-YCDE, AW920-50DE**
Concentrated:	**NIL**
Recommended Positive Control:	**FG-920PE**
Recommended Barrier Control:	**FB-920PE**

SLAMF7 (Signaling lymphocytic activation molecule F7) also known as CS1 (CD2 subset 1), CRACC (CD2-like receptor-activating cytotoxic cell) and CD319, is a type I transmembrane protein and a member of the SLAM receptors family. SLAM receptors modulate the activation and differentiation of a wide variety of immune cells and thus are involved in the regulation and interconnection of both innate and adaptive immune response. SLAMF7 is abundantly present in most cases of multiple myeloma (MM), a nearly universally fatal malignancy of plasma cells. Targeting SLAMF7 with Elotuzumab, a humanized mAb against SLAMF7 is approved for the treatment of relapsed MM. The anti-tumor effects of elotuzumab include disrupting MM cell adhesion to bone marrow stromal cells, enhancing NK cell cytotoxicity, and mediating antibody-dependent cell-mediated cytotoxicity (ADCC), but not complement-mediated cytotoxicity (CDC) (4). SLAMF7 is also found on natural killer (NK) cells, activated T cells, most B cells and myeloid cells.

SOX2



P

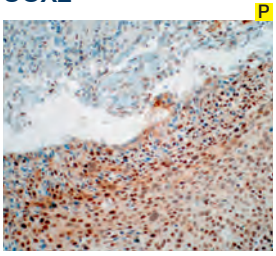
Squamous stained with anti-Human SOX2 using DAB chromogen

Clone:	EP103
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues in human SOX2 protein
Specificity:	Human SOX2
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN833-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN833-10M**
Xmatrx®	**AY833-YCD, AY833-50D**
Concentrated:	**NU833-UC, NU833-5UC**
Recommended Positive Control:	**FG-833N**
Recommended Barrier Control:	**FB-833N**

SOX2 is a member of the SRY-related HMG-box (SOX) family of transcription factors involved in the regulation of embryonic development and in the determination of cell fate. It is required for stem cell maintenance in the central nervous system, and it also regulates gene expression in the stomach. SOX2 is necessary for regulating multiple transcription factors that affect Oct3/4 expression. An essential function of SOX2 is to stabilize embryonic stem cells in a pluripotent state by maintaining the requisite level of Oct3/4 expression.

SOX2



P

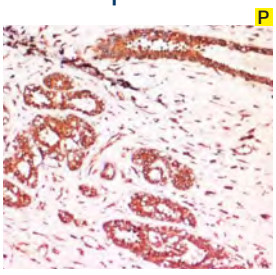
Uterus carvex stained with anti-Human SOX2 using DAB chromogen

Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to SOX2 that is not observed in cystolic extracts
Specificity:	Human SOX2
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR788-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR788-10R**
Xmatrx®	**AW788-YCD, AW788-50D**
Concentrated:	**PU788-UP, PU788-5UP**
Recommended Positive Control:	**FG-788P**
Recommended Barrier Control:	**FB-788P**

SOX 2 is also known as SRY related HMG BOX gene 2. All SOX proteins have a single HMG box and bind linear DNA in a sequence specific manner, resulting in the bending of DNA through large angles. Bending causes the DNA helix to open for some distance, which may affect binding and interactions of other transcription factors. SOX1, SOX2 and SOX3 show the closest homology to SRY. They share maximum homology within the HMG domain and are expressed mainly in the developing nervous system of the mouse. These genes share significant homology outside the HMG box also and are highly conserved throughout their evolution.

STAT5 alpha



P

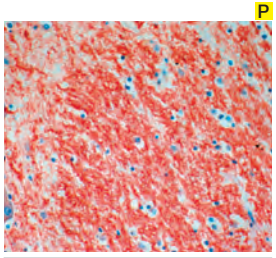
Breast cancer stained with STAT5

Clone:	6D4
Isotype:	IgG1
Source:	Mouse
Immunogen:	Recombinant fragment of human STAT5α expressed in E. coli
Specificity:	STAT5 alpha
Localization:	Cell membrane
Pre-treatment:	EZ-AR2 Elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM972-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM972-10M**
Xmatrx®	**AX972-50D, AX972-YCD**
Concentrated:	**MU972-UC, MU972-5UC**
Recommended Positive Control:	**FG-972M**
Recommended Barrier Control:	**FB-972M**

STAT5 alpha is a member of the STAT family of transcription factors. In response to cytokines and growth factors, STAT family members are phosphorylated by the receptor associated kinases and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein mediates the responses of many cell ligands. Activation of STAT5 alpha in myeloma and lymphoma associated with a TEL/JAK2 gene fusion is independent of cell stimulus and has been shown to be essential for the tumorigenesis. STAT5 alpha is critically involved in a variety of physiological functions, including reproduction, lactation, immune function, and somatic growth.

Substance P



P

Brain tissue stained with Anti-Substance P using AEC chromogen

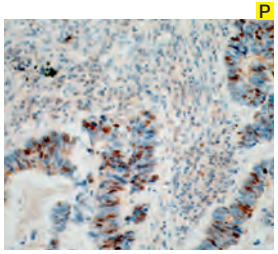
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Synthetic Substance P bound to keyhole limpet hemocyanin (KLH)
Specificity:	Substance P
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR069-5R,**
Ready-to-Use (Automated):	
***i*6000™**	**AR069-10R**
Xmatrx®	**AW069-YCD, AW069-50D**
Concentrated:	**PU069-UP, PU069-5UP**
Recommended Positive Control:	**FG-069P**
Recommended Barrier Control:	**FB-069P**

Substance P is one of several neuroendocrine polypeptides localized in both the nervous system and gastrointestinal tract. Substance P is grouped into a family with bombesin and neurotensin because all three peptides are located in both brain and gut and terminate with a common dipeptide sequence (-Leu-Met-NH 2) at the amino terminal end. Substance P is found in most mid-gut and about half of fore-gut and hind-gut intestinal carcinoids. This antibody cross-reacts with other species including chicken and opossum. This antibody stains Substance P in nerve fibers.

Survivin

P



Colon cancer tissue stained with anti-Human Survivin using DAB chromogen

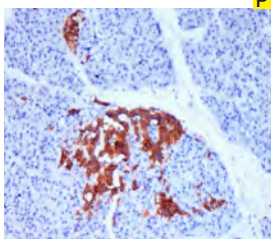
Clone:	EP119
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the N-terminus of human Survivin protein
Specificity:	Human Survivin
Localization:	Nucleus/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN826-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN826-10M**
Xmatrx®	**AY826-YCD, AY826-50D**
Concentrated:	**NU826-UC, NU826-5UC**
Recommended Positive Control:	**FG-826N**
Recommended Barrier Control:	**FB-826N**

The association of survivin expression with tumor progression, but not overall patient survival, has been observed in a variety of malignancies including renal cell carcinoma, ovary carcinoma, hepatocellular carcinoma, prostate carcinoma and breast carcinoma. However, the link between a poor prognosis and nuclear expression of Survivin in tumors is controversial. A literature review of 19 publication that measured nuclear survivin in different cancer types showed the following: 9 studies concluded that nucelar survivin was associated with an unfavorable prognosis, whereas 5 showed a favorable prognosis. The authors concluded that the nuclear pool of survivin is involved in promoting cell proliferation in most (if not all) cases, whereas the cytoplasmic pool of survivin may participate in controlling cell survival but not cell proliferation.

Synaptophysin

P



Cerebellum stained with Anti-Synaptophysin using AEC chromogen

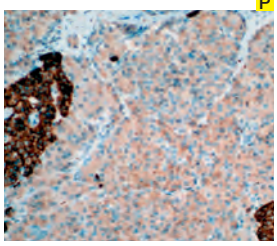
Clone:	Snp88
Isotype:	IgG3 Kappa
Source:	Mouse
Immunogen:	Recombinant human synaptophysin
Specificity:	Synaptophysin protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1 elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM363-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM363-10M**
Xmatrx®	**AX363-YCD, AX363-50D**
Concentrated:	**MU363-UC, MU363-5UC**
Recommended Barrier Control:	**FB-363M**
Recommended Positive Control:	**FG-363M**

Synaptophysin, a 38 kD glycoprotein, is the major integral membrane protein of synaptic vesicles. It is a sensitive quantitative molecular marker of synaptic density and also a useful marker in the identification and characterization of neuronal and neuroendocrine neoplasms of the adrenal medullary, pituitary, thyroid and islet cell tumors, gastrointestinal, bronchial, thymic and pancreatic carcinoid tumors. Immunohistochemistry of synaptophysin has been used in the evaluation of functional bowel disorders, cortical epileptogenesis, schizophrenia and amyotropic lateral sclerosis.

Synaptophysin

P



Pancreas stained with anti-Human Synaptophysin using DAB chromogen

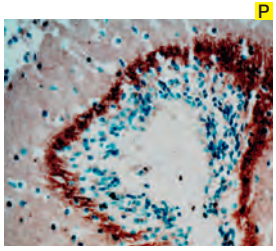
Clone:	EP158
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to residues on the C-terminus (cytoplasmic domain) of human Synaptophysin protein
Specificity:	Human Synaptophysin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN857-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN857-10M**
Xmatrx®	**AY857-YCD, AY857-50D**
Concentrated:	**NU857-UC, NU857-5UC**
Recommended Positive Control:	**FG-857N**
Recommended Barrier Control:	**FB-857N**

Synaptophysin is a major integral transmembrane glycoprotein of synaptic vesicles with four transmembrane domains. This protein is present in almost all neurons and neuroendocrine cells throughout the body. An antibody to Synaptophysin is useful for the identification of tumors with neural and neuroendocrine differentiation.

Tau

P



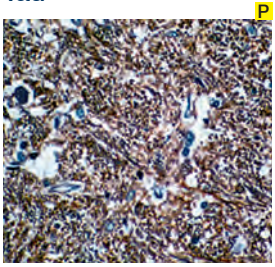
Cerebellum stained with Anti-Tau using DAB chromogen

Clone:	Tau-2
Isotype:	IgG1
Source:	Mouse
Immunogen:	Purified bovine Microtubule Associated Protein Tau (MAPT)
Specificity:	Tau protein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1 elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM412-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM412-10M**
Xmatrx®	**AX412-YCD, AX412-50D**
Concentrated:	**MU412-UC, MU412-5UC**
Recommended Positive Control:	**FG-412M**
Recommended Barrier Control:	**FB-412M**

Tau's major role is to regulate neuronal microtubule assembly and stability thus playing a major role in movement disorders. Neurofibrillary tangles (NFTs), one of the histopathological signs of Alzheimer's Disease, contain a lot of incorporated Tau protein. Anti-Tau antibody shows strong positive staining in NFT areas and may also stain pick bodies in Pick's Disease. In normal tissue, the antibody may stain neurons and axons in the brain and spinal cord. This antibody stains the cytoplasm of neurons and its connected axon.

Tau



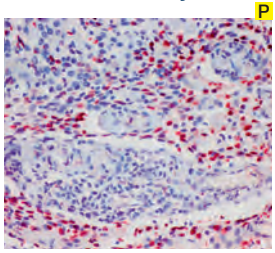
Tau expression in normal brain tissue stained using DAB chromogen

Clone:	Tau-5
Isotype:	IgG1
Source:	Mouse
Immunogen:	Human Tau
Specificity:	Tau
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM459-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM459-10M**
Xmatrx®	**AX459-YCD, AX459-50D**
Concentrated:	**MU459-UC, MU459-5UC**
Recommended Positive Control:	**FG-459M**
Recommended Barrier Control:	**FB-459M**

This antibody recognizes proteins of 45-68 kD, identified as tau proteins. The Tau monoclonal antibody reacts with the non-phosphorylated as well as the phosphorylated forms of tau. Tau proteins are members of the microtubule associated proteins (MAPs) that stabilize neuronal microtubules in cell processes, establishment of cell polarity and intracellular transport. Six isoforms, ranging from 352 to 441 amino acids, are generated from a single Tau gene by alternative splicing in the human central nervous system. In Alzheimer's disease, abnormally phosphorylated, tau proteins aggregate into paired helical filaments and loose their ability to maintain the microtubule tracks. Missense Tau mutations in individuals with a type of frontotemporal dementia, FTDP 17, have been discovered.

Terminal Deoxynucleotidyl Transferase (TdT)



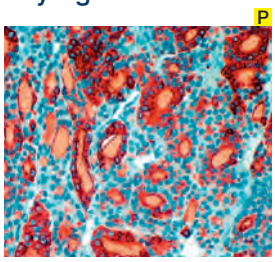
Thymoma stained with Anti-Terminal deoxynucleotidyl Transferase (TdT) using AEC chromogen

Clone:	EP266
Isotype:	IgG
Source:	Rabbit
Immunogen:	Peptide containing specific sequence for N-terminal of human TdT protein
Specificity:	TdT
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN881-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN881-10M**
Xmatrx®	**AY881-YCD, AY881-50D**
Concentrated:	**NU881-UC, NU881-5UC**
Recommended Positive Control:	**FG-881N**
Recommended Barrier Control:	**FB-881N**

This antibody identifies a 58 kD peptide normally found in cortical thymocytes and immature bone marrow lymphocytes. TdT expression has been reported to occur in a majority of cases of acute lymphocytic leukemia (ALL) cases. TdT staining is found in all subtypes of ALL with the exception of pre-B-cell ALL. TdT positivity has also been observed in approximately one third of all cases of chronic myeloid leukemia. TdT positive staining is found in ALL, acute myeloid leukemia and chronic myeloid leukemia. This antibody stains predominantly nuclear TdT in normal and neoplastic cells.

Thyroglobulin



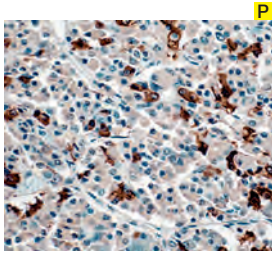
Follicular adenoma stained with anti-Thyroglobulin using AEC chromogen

Clone:	2H11
Isotype:	IgG1
Source:	Mouse
Immunogen:	Purified human thyroglobulin
Specificity:	Thyroglobulin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM032-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM032-10M**
Xmatrx®	**AX032-YCD, AX032-50D**
Concentrated:	**MU032-UC, MU032-5UC**
Recommended Positive Control:	**FG-032M**
Recommended Barrier Control:	**FB-032M**

Thyroglobulin is a 19S glycoprotein with a molecular mass of approximately 650 kD. It constitutes 85-100% of the total of all thyroid iodoproteins. Immunohistochemical studies of thyroid carcinomas have revealed that a high portion of differentiated thyroid carcinomas synthesize thyroglobulin. Positive thyroglobulin staining indicates thyroidal origin of the tumor. Immunohistochemical and electron microscopic findings have disclosed a wide range of cellular differentiation in thyroid adenomas.

Thyroid Stimulating Hormone (TSH)



Pituitary cell showing cytoplasmic positivity for TSH stained using DAB chromogen

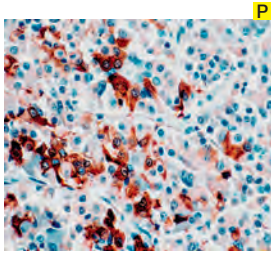
Clone:	5404
Isotype:	IgG1 Kappa
Source:	Mouse
Immunogen:	TSH
Specificity:	Thyroid Stimulating Hormone (TSH)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM033-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM033-10M**
Xmatrx®	**AX033-YCD, AX033-50D**
Concentrated:	**MU033-UC, MU033-5UC**
Recommended Positive Control:	**FG-033M**
Recommended Barrier Control:	**FB-033M**

Thyrotrophs produce Thyroid Stimulating Hormone (TSH). TSH is a 28 kD glycoprotein that contains 201 amino acid residues and is composed of alpha and beta subunits. The alpha subunit (MW 13kD) is immunologically similar to the alpha subunit of the other anterior pituitary hormones. The beta subunit is unique to TSH and is responsible for the specific biological activity of TSH. To identify thyrotrophs without cross-reactivity with gonadotrophs, antibodies directed to the TSH beta subunit must be used. This antibody stains TSH and b-TSH in cytoplasm of postive cells.

Thyroid Stimulating Hormone (TSH)

P



Pituitary cell showing cytoplasmic positivity for TSH stained using AEC chromogen

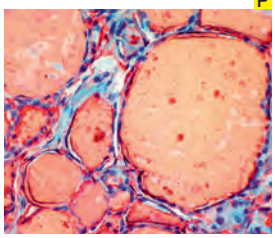
Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Purified TSH from human pituitary gland
Specificity:	Thyroid Stimulating Hormone (TSH)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR033-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR033-10R**
Xmatrx®	**AW033-YCD, AW033-50D**
Concentrated:	**NU033-UC, NU033-5UC**
Recommended Positive Control:	**FG-033P**
Recommended Barrier Control:	**FB-033P**

Thyrotrophs produce Thyroid Stimulating Hormone (TSH). TSH is a 28 kD glycoprotein that contains 201 amino acid residues and is composed of alpha and beta subunits. The alpha subunit (MW 13kD) is immunologically similar to the alpha subunit of the other anterior pituitary hormones. The beta subunit is unique to TSH and is responsible for the specific biological activity of TSH. To identify thyrotrophs without cross-reactivity with gonadotrophs, antibodies directed to the TSH beta subunit must be used. This antibody stains positive for TSH in cytoplasm of thyrotrophs.

Thyroxine

P



Thyroid tissue stained with Anti-Thyroxine using AEC chromogen

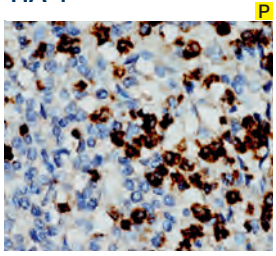
Clone:	D5
Isotype:	IgG1
Source:	Mouse
Immunogen:	Me-Thyroxine conjugated to bovine serum albumin
Specificity:	Thyroxine (T4)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	None
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM034-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM034-10M**
Xmatrx®	**AX034-YCD, AX034-50D**
Concentrated:	**MU034A-UC, MU034A-5UC**
Recommended Positive Control:	**FG-034M**
Recommended Barrier Control:	**FB-034M**

The main hormones produced by the thyroid are Thyroxine (T4 or tetraiodothyronine) and, on a much smaller scale, triiodothyronine (T3). T4 and T3 have been demonstrated in normal and neoplastic thyroid follicular cells. In thyroid cancer, however, the iodine content may be 1/100 that of normal thyroid tissue, whereas thyroglobulin is much more abundant, occurring at 1/2 to 1/3 that of a normal thyroid. This antibody stains colloid in thyroid follicle and cytoplasm of thyroid follicular cells.

TIA-1

P



Anaplastic large T Cell Lymphoma stained with Anti-TIA using DAB chromogen

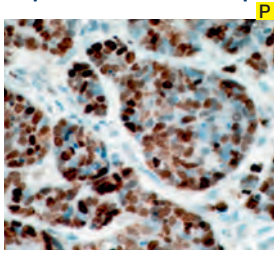
Clone:	2G9A10F5
Isotype:	IgG
Source:	Mouse
Immunogen:	Human bone marrow malignant cells from a non-B, non-T acute leukemia
Specificity:	TIA-1
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM529-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM529-10M**
Xmatrx®	**AX529-YCD, AX529-50D**
Concentrated:	**MU529-UC, MU529-5UC**
Recommended Positive Control:	**FG-529M**
Recommended Barrier Control:	**FB-529M**

The T cell intracellular antigen 1 (TIA-1) is a 17-kD cytoplasmic granule associated protein also designated as GMP-17, for granule membrane protein of 17 kD. The GMP-17/TIA-1 molecule is expressed in cells possessing cytolytic potential and could be involved in the signaling cascade of Fas (CD95)-mediated apoptosis. Within hematopoietic cell lines, the 2G9 monoclonal antibody (mAb) reacts with about 90% of CD16+, 50 – 60% of CD8+, and less than 10% of CD4+ normal peripheral blood lymphocytes. It reacts with almost all monocytes and granulocytes. This antibody also reacts with CD4+ activated T-cell clones, activated NK cell clones, and Con A activated thymocytes, but not with B lymphocytes or B-cell lines.

Topoisomerase II alpha

P



Breast cancer tissue stained with anti-Human Topoisomerase II alpha using DAB chromogen

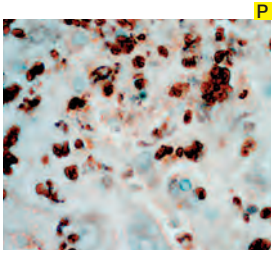
Clone:	EP93
Isotype:	IgG
Source:	Rabbit
Immunogen:	A synthetic peptide corresponding to C-terminal residues of human Topoisomerase II alpha (TOP2A) protein.
Specificity:	Human Topoisomerase II alpha
Localization:	Nucleus/Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN823-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN823-10M**
Xmatrx®	**AY823-YCD, AY823-50D**
Concentrated:	**NU823-UC, NU823-5UC**
Recommended Positive Control:	**FG-823N**
Recommended Barrier Control:	**FB-823N**

DNA topoisomerase II alpha (Topo-IIα) is an essential nuclear enzyme with its up-regulation demonstrated in different tumors. Topo II is required in chromatin condensation and segregation during mitosis. Topo II α is cell cycle regulated and its level peaks between G2 and M phase. It has been linked to cell proliferation and it may be the main isoform of Topo II involved mitotic processes. Topo II α passes one strand of DNA through a reversible break in a second DNA strand, which catalyzes the topological isomerization of DNA during cell cycle. Topo II α overexpression has been linked to a number of human malignancies and is the target for many chemotherapeutic agents. The majority of anticancer drugs targeting Topo IIα initiate apoptosis by stabilizing the covalent complex formed between DNA and Topo IIα.

Toxoplasma gondii

P



Infected cells stained with Anti-Toxoplasma using DAB chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	This antibody was produced by immunization of rabbits with live organisms of *Toxoplasma gondii* strain C56.
Specificity:	Toxoplasma gondii
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR125-5RE**
Concentrated:	**PU125-UPE, PU125-5UPE**
Recommended Positive Control:	**FG-125PE**
Recommended Barrier Control:	**FB-125PE**

RUO

This antibody stains *Toxoplasma gondii* in the cytoplasm of infected cells or tissues stained by immunohistochemical techniques.

Transferrin

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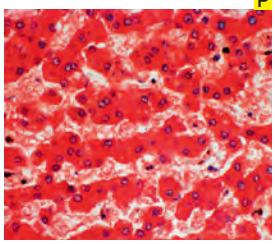


Liver tissue stained with Anti-Transferrin using AEC chromogen

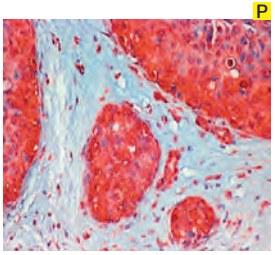
Clone:	HT1/13.6.3
Isotype:	IgG1
Source:	Mouse
Immunogen:	Transferrin
Specificity:	Transferrin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM025-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM025-10M**
Xmatrx®	**AX025-YCD, AX025-50D**
Recommended Positive Control:	**FG-025M**
Recommended Barrier Control:	**FB-025M**

Human transferrin, an iron-binding protein, is produced mainly in the liver, and can be demonstrated within hepatocytes. Transferrin has also been demonstrated by immunohistology in a wide variety of other tissues including stomach, duodenum, gallbladder, thyroid, kidney, male and female reproductive tracts, skin, and in histiocytes. Such widespread occurrence of transferrin suggests evidence for the diverse roles that it may play such as iron transport across intestinal mucosa, intracellular iron transport, and providing non-specific immunity against micro-organisms by chelating free iron.

Transforming Growth Factor (TGF), Alpha

P



Breast carcinoma showing TGF positivity stained using AEC chromogen

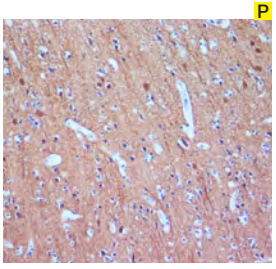
Clone:	TGF88
Isotype:	IgG1
Source:	Mouse
Immunogen:	Synthetic peptide representing a unique epitope to pro-TGF-α covalently bound to keyhole limpet hemocyanin
Specificity:	Transforming growth factor, alpha (TGF-α)
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM377-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM377-10M**
Xmatrx®	**AX377-YCD, AX377-50D**
Concentrated:	**MU377-UC, MU377-5UC**
Recommended Positive Control:	**FG-377M**
Recommended Barrier Control:	**FB-377M**

Transforming Growth Factor, alpha (TGF-α) is a 50 amino acid peptide that is involved in the regulation of normal and malignant cell growth. The mature peptide is released following proteolytic cleavage from a 160 amino acid transmembrane precursor molecule. It is one of the various ligands for EGFR and seem to be involved in the growth regulation of intestinal mucosa and might be related to the development and progression of gastrointestinal tumors. Macrophages secrete TGF-α to trigger proliferation of cancer cells. TGF-α is synthesized by several cells, like epidermal keratinocytes, fibroblasts, and cells of hematopoetic origin like eosinophils and simulated macrophages.

Tubulin β3

P



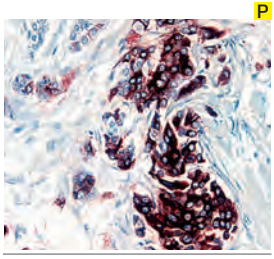
Brain stained with Tubulin β3

Clone:	TUJ1
Isotype:	IgG1
Source:	Mouse
Immunogen:	Full-length human TUBB3 protein
Specificity:	TUBB3
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM952-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM952-10M**
Xmatrx®	**AX952-50D, AX952-YCD**
Concentrated:	**MU952-UC, MU952-5UC**
Recommended Positive Control:	**FG-952M**
Recommended Barrier Control:	**FB-952M**

Beta tubulins are one of two core protein families (alpha and beta tubulins) that heterodimerize and assemble to form microtubules. This protein is primarily expressed in neurons and may be involved in neurogenesis and axon guidance and maintenance. In adults tubulin beta 3 (TUBB3) is primarily expressed in neurons and is commonly used as a neuronal marker. It plays an important role in neuronal cell proliferation and differentiation. Mutations in this gene cause congenital fibrosis of the type 3 extraocular muscles. Tubulin beta 3 (TUBB3) is also found in a wide range of tumors. Studies indicate that it is a predictive and prognostic marker in various tumors.

Tumor-Associated Glycoprotein (TAG-72)



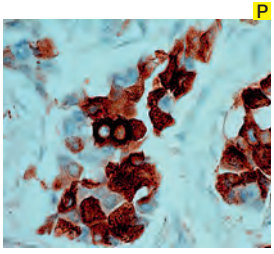
Breast carcinoma stained with Anti-TAG-72 (BCA) using DAB chromogen

Clone:	B72.3
Isotype:	IgG1
Source:	Mouse
Immunogen:	Membrane-enriched fraction of a breast carcinomaderived from a liver metastasis
Specificity:	Tumor-Associated Glycoprotein (TAG-72)
Localization:	Cytoplasm
Pre-treatment:	None

Ready-to-Use (Manual):	**AM054-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM054-10M**
Xmatrx®	**AX054-YCD, AX054-50D**
Concentrated:	**MU054-UC, MU054-5UC**
Recommended Positive Control:	**FG-054M**
Recommended Barrier Control:	**FB-054M**

Tumor-Associated Glycoprotein 72 (TAG-72) is an oncofetal mucin antigen expressed by normal secretory endometrium and most human adenocarcinomas, including colorectal, gastric, pancreatic, mammary, and ovarian. This antigen is expressed by invasive ductal breast carcinomas, colon, pancreatic, gastric, esophageal, lung, ovarian and endometrial adenocarcinomas. It is not expressed by leukemias, lymphomas, sarcomas, mesotheliomas, melanomas, or benign tumors. This antigen is also expressed on normal secretory endometrium, but not on other normal tissues. This antibody stains positive in the cytoplasm of specific carcinoma cells.

Tumor-Associated Glycoprotein (TAG-90, BCA)



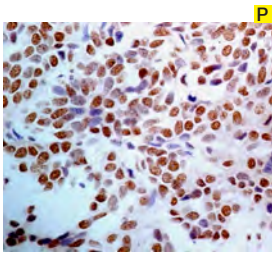
Breast carcinoma stained with Anti-TAG-90 (BCA) using DAB chromogen

Clone:	B6.2
Isotype:	IgG1
Source:	Mouse
Immunogen:	Membrane-enriched fraction of breast tumor metastatic to the liver
Specificity:	90 kD tumor-associated glycoprotein
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM005-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM005-10M**
Xmatrx®	**AX005-YCD, AX005-50D**
Concentrated:	**MU005-UC, MU005-5UC**
Recommended Positive Control:	**FG-005M**
Recommended Barrier Control:	**FB-005M**

Clone B6.2 recognizes a 90 kD glycoprotein in mammary carcinomas, metastatic lymph nodes, lung carcinomas, and adenocarcinomas. This antibody reacts intensely with tumor cells, yet is unreactive with cells in normal tissue. This antibody reacts equally with breast cancer, breast fibroadenoma, lobular carcinoma of the breast, duct carcinoma of the breast, and lung carcinoma. It also reacts with gastric and papillary adenocarcinomas, and adenocarcinoma of the colon, ovary, pancreas, lung and prostate. This antibody stains positive in the cytoplasm of tumor cells.

Thyroid Transcription Factor (TTF-1)



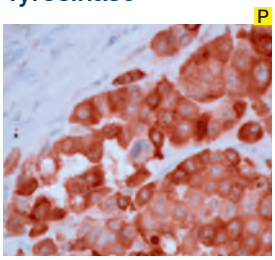
Thyroid tissue stained with anti-TTF-1 using DAB chromogen

Clone:	SP141
Isotype:	IgG
Source:	Rabbit
Immunogen:	Recombinant TTF-1 protein
Specificity:	TTF-1
Localization:	Nucleus
Pre-treatment:	EZ-AR2 elegance
Manual:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN887-5M**
Ready-to-Use (Automated):	
***i*6000TM**	**AN887-10M**
Xmatrx®	**AY887-YCD, AY887-50D**
Concentrated:	**NU887-UC , NU887-5UC**
Recommended Positive Control:	**FG-887N**
Recommended Barrier Control:	**FB-887N**

Thyroid Transcription Factor-1 (TTF-1), also known as thyroid-specific enhancer-binding protein (T/EBP), is a 40 kD protein that is a member of NKx2 family of homeodomain transcription factors that regulates the expression of thyroid- and lung-specific genes. It is a very selective marker for adenocarcinomas of lung and thyroid origin. Nuclear localization of this protein is seen in the epithelial cells of thyroid gland and lung. The anti-TTF-1 antibody is a useful tool for differentiating pulmonary adenocarcinoma from metastatic breast carcinoma and mesothelioma.

Tyrosinase



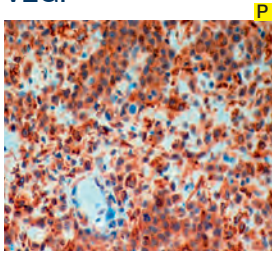
Melanoma stained with Anti-Tyrosinase using DAB chromogen

Clone:	Ty/G5
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Human Tyrosinase
Specificity:	Tyrosinase
Localization:	Cytoplasm
Pre-treatment:	EZ-AR1/EZ-AR2 elegance
Manual/i6000:	HK546-XAK/HK547-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AM535-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM535-10M**
Xmatrx®	**AX535-YCD, AX535-50D**
Concentrated:	**MU535-UC, MU535-5UC**
Recommended Positive Control:	**FG-535M**
Recommended Barrier Control:	**FB-535M**

Tyrosinase is a copper-containing enzyme present in plant and animal tissues that catalyzes the production of melanin and other pigments from tyrosine by oxidation. The gene for tyrosinase is regulated by the microphthalmia-associated transcription factor. A mutation in the tyrosinase gene resulting in impaired tyrosinase production results in type I oculocutaneous albinism, a hereditary disease that one in every 17,000 person has in the US. Anti-tyrosinase has been found to be quite specific for melanotic lesions such as malignant melanoma, and melanotic neurofibroma. Essentially no carcinomas express this marker.

VEGF



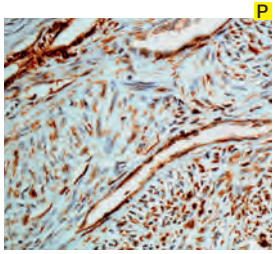
Angiosarcoma stained with Anti-VEGF using DAB chromogen

Clone:	Polyclonal
Source:	Rabbit
Immunogen:	Human recombinant VEGF165
Specificity:	VEGF
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR483-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR483-10R**
Xmatrx®	**AW483-YCD, AW483-50D**
Concentrated:	**PU483-UP, PU483-5UP**
Recommended Positive Control:	**FG-483P**
Recommended Barrier Control:	**FB-483P**

Vascular endothelial factors (VEGFs) are a family of closely related growth factors having a conserved pattern of eight cysteine residues and sharing common VEGF receptors. VEGF receptors stimulate the proliferation of endothelial cells, induce angiogenesis, and increase vascular permeability in both large and small vessels. The mitogenic activity of VEGFs appears to be mediated by specific VEGF receptors.

Vimentin



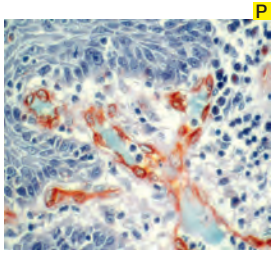
Skin stained with Anti-Vimentin Antibody using DAB chromogen

Clone:	V9
Isotype:	IgG1
Source:	Mouse
Immunogen:	Vimentin purified from porcine eye lens
Specificity:	Vimentin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM074-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM074-10M**
Xmatrx®	**AX074-YCD, AX074-50D**
Concentrated:	**MU074-UC, MU074-5UC**
Recommended Positive Control:	**FG-074M**
Recommended Barrier Control:	**FB-074M**

Vimentin is the major intermediate filament in a variety of mesenchymal or mesenchymally derived non-muscle cell types. Vimentin is found in all types of sarcomas and lymphomas. Positive staining for vimentin is seen in most cells of fibrosarcomas, liposarcomas, malignant fibrous histocytomas, angiosarcomas, chondrosarcomas and lymphomas. When the vimentin antibody is used in combination with other antibodies as a panel, it can aid in the histological classification of normal and malignant tissues. This antibody immunohistochemically labels a variety of mesenchymal cells.

Vimentin, Non-Hematopoietic



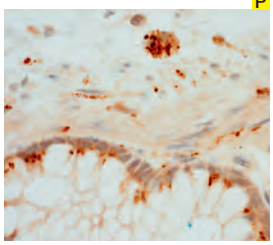
Leiomyoma stained with anti-Vimentin using DAB chromogen

Clone:	LN6
Isotype:	IgM
Source:	Mouse
Immunogen:	Human Thymic Nuclei
Specificity:	Non-hematopoietic vimentin
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM163-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM163-10M**
Xmatrx®	**AX163-YCD, AX163-50D**
Concentrated:	**MU163-UC, MU163-5UC**
Recommended Positive Control:	**FG-163M**
Recommended Barrier Control:	**FB-163M**

LN6 recognizes a unique epitope of vimentin, a 60 kD protein, not expressed in cells of hematopoietic derivation. LN6 can be useful in the immunohistological study of soft tissue disorders. It reacts strongly with sarcomas, melanomas and meningomas. LN6 does not, however, stain leukocyte common antigen-positive tissues such as lymphomas and leukemias. In normal tissue, LN6 stains endothelium, muscle, fibroblasts, melanocytes, peripheral nerve, Sertoli cells, kidney mesangial cells and tubules, osteoblasts and periosteum. This antibody stains non-hematopoietic form of Vimentin in human sarcomas and normal cells of mesenchymal derivation but is nonreactive with cells of hematopoietic derivation.

VIP



Intestine tissue stained with Anti-VIP using DAB as chromogen

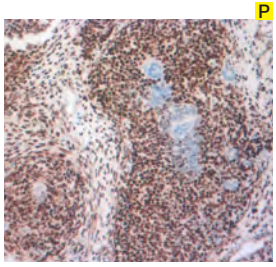
Clone:	Polyclonal
Isotype:	IgG
Source:	Rabbit
Immunogen:	Synthetic peptide corresponding to full length mature vasoactive intestinal peptide conjugated to Keyhole Limpet Haemocyanin
Specificity:	VIP
Localization:	Cytoplasm
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AR530-5R**
Ready-to-Use (Automated):	
***i*6000™**	**AR530-10R**
Xmatrx®	**AW530-YCD, AW530-50D**
Concentrated:	**PU530-UP, PU530-5UP**
Recommended Positive Control:	**FG-530P**
Recommended Barrier Control:	**FB-530P**

Vasoactive intestinal peptide (VIP) is a 28 amino acid neuropeptide that has been isolated from various organs like intestine, the brain, upper respiratory and nasal mucosa, salivary glands, and the male and female genital tracts. It is also identifiable in human eosinophils, polymorphonuclear and mononuclear leucocytes. VIP is also known as a potent stimulant of mucous secretion, vasodilatation, and smooth muscle relaxation in bronchus and many other organs. According to various studies, VIP also has effects on the immune regulation. VIP is known to have inhibited the proliferative response of T lymphocytes to mercuric chloride, and inhibited natural killer (NK) cell function.

WT1

P



Wilm's tumor stained with WT-1

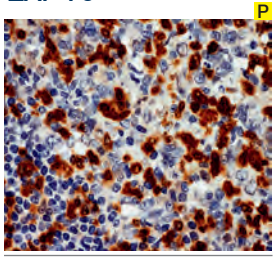
Clone:	WT1/1434R
Isotype:	IgG
Source:	Rabbit
Immunogen:	Recombinant human WT1 protein
Specificity:	WT1
Localization:	Cell membrane
Pre-treatment:	EZ-AR1 Elegance
Manual/i6000:	HK546-XAK
Xmatrx:	HX031-YCD

Ready-to-Use (Manual):	**AN940-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN940-10M**
Xmatrx®	**AY940-50D, AY940-YCD**
Concentrated:	**NU940-UC, NU940-5UC**
Recommended Positive Control:	**FG-940N**
Recommended Barrier Control:	**FB-940N**

WT-1 monoclonal antibody recognizes a 47-55 kDa tumor suppressor protein, identified as Wilm's Tumor (WT1) protein. The antibody reacts with all isoforms of the full-length WT1 and also identifies WT1 lacking exon 2-encoded amino acids, frequently found in subsets of sporadic Wilm's tumors.WT1, a sporadic and familial pediatric kidney tumor, is genetically heterogeneous. Wilm's tumor is associated with mutations of WT1, a zinc-finger transcription factor that is essential for the development of the metanephric kidney and the urogenital system. The WT1 gene is normally expressed in fetal kidney and mesothelium, and its expression has been suggested as a marker for Wilm's tumor and mesothelioma. WT1 protein has been identified in proliferative mesothelial cells, malignant mesothelioma, ovarian carcinoma, gonadoblastoma, nephroblastoma, and desmoplastic small round cell tumor. WT1 protein expression in mesothelial cells has become a reliable marker for the diagnosis of mesotheliomas.

ZAP-70

P



Tonsil tissue stained with Anti-ZAP-70 using DAB chromogen

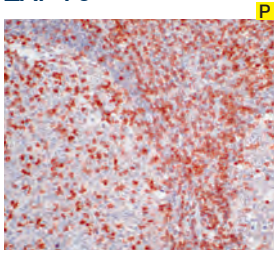
Clone:	ZAP70-C3
Isotype:	IgG2a
Source:	Mouse
Immunogen:	Human ZAP-70
Specificity:	ZAP-70
Localization:	Cytoplasm/Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM544-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AM544-10M**
Xmatrx®	**AX544-YCD, AX544-50D**
Concentrated:	**MU544-UC, MU544-5UC**
Recommended Positive Control:	**FG-544M**
Recommended Barrier Control:	**FB-544M**

ZAP-70 is an abbrevation for Zeta-chain-associated protein kinase 70 (70 is the molecular weight in kD). The protein is a member in the protein-tyrosine kinase family. ZAP-70 protein is expressed in leukemic cells of approximately 25% of Chronic Lymphocytic Leukemia (CLL) cases. ZAP-70 expression is an excellent surrogate marker for the distinction between the Ig-mutated (ZAP-70 negative) and Ig-unmutated (ZAP-70 positive) CLL subtypes and can identify patient groups with divergent clinical courses. The ZAP-70 positive Ig-unmutated CLL cases have a poorer prognosis.

ZAP-70

P



Tonsil stained with anti-Human ZAP-70 using DAB chromogen

Clone:	EP52
Isotype:	IgG
Source:	Rabbit
Immunogen:	Human ZAP-70 protein
Specificity:	Human ZAP-70
Localization:	Cytoplasm/Membrane
Pre-treatment:	EZ-AR2 elegance
Manual/i6000:	HK547-XAK
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AN852-5M**
Ready-to-Use (Automated):	
***i*6000™**	**AN852-10M**
Xmatrx®	**AY852-YCD, AY852-50D**
Concentrated:	**NU852-UC, NU852-5UC**
Recommended Positive Control:	**FG-852N**
Recommended Barrier Control:	**FB-852N**

ZAP-70, a Syk-family protein tyrosine kinase, plays a critical role in mediating T cell signal transduction in response to T cell antigen receptor (TCR) activation. It is primarily expressed in T cells and natural killer (NK) cells. It also labels mast cells, basophils and pro/pre B cells but not mature B cells. ZAP-70 antibody is useful in identification of the subtype of chronic lymphocytic leukemia (CLL). ZAP-70 is positive in CLL with mutation of the immunoglobulin heavy-chain variable region (IgVH) genes, but negative in CLL without IgVH mutation. ZAP-70 expression is associated with disease progression in CLL.

IHC Detection Systems

Super Sensitive™ IHC Detection Systems

Immunohistochemistry is a highly sensitive method that allows the localization of an antigen within a cell or a tissue with high resolution. The method is based on the use of a primary antibody that specifically binds to its complementary antigen. The bound antibody may then be visualized by a variety of methods such as colorimetric end points.

BioGenex offers three basic types of IHC Detection Systems:

I. Super Sensitive™ (SS) Polymer-HRP IHC Detection System

This is a novel detection system using a non-biotin polymeric technology that makes use of two major components: Super Enhancer and a Poly-HRP reagent. As the system is not based on the biotin-avidin system, problems associated with endogenous biotin are completely eliminated. The enzyme Horseradish Peroxidase (HRP) catalyzes the conversion of chromogenic substrates (e.g. DAB, AEC) into colored products facilitating tissue staining.

Features & Benefits:

- High signal to noise ratio without endogenous biotin background
- Excellent sensitivity for weakly expressed antigens
- Universal system for rabbit and mouse antibodies
- Excellent cell penetration ability for intense nuclear, cytoplasmic and membrane antigen staining
- Enabling higher dilution of antibodies for reduced cost
- Available in barcode labeled (Xmatrx®, i6000™) vials for automation or in drop bottles for easy to use manual staining

II. Super Sensitive™ (SS) One-Step Polymer-HRP IHC Detection System

All the benefits of SS Polymer-HRP IHC Detection System mentioned above with an easy and fast 15 minutes staining protocol

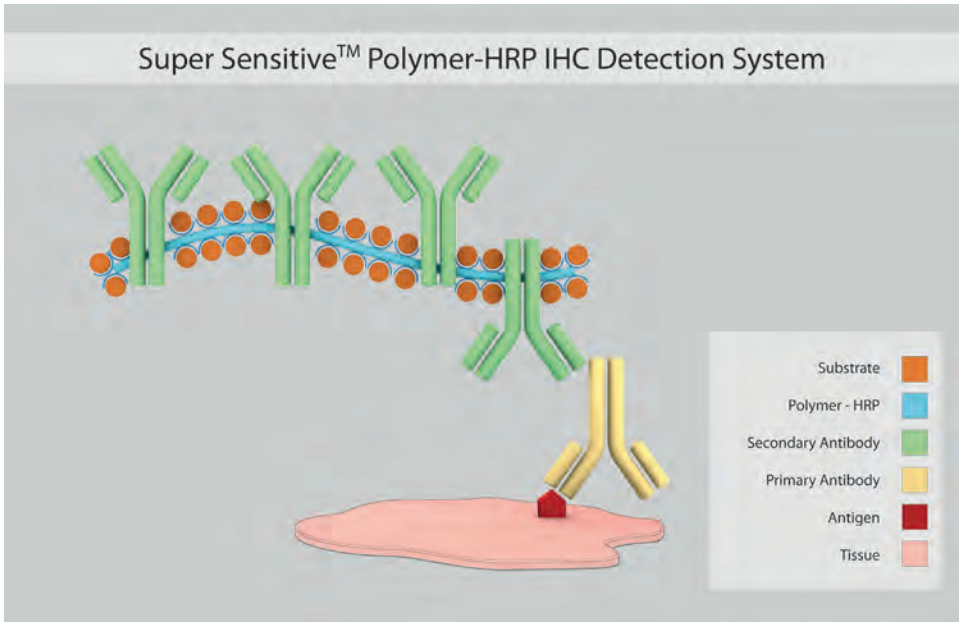
III. Super Sensitive™ (SS) Link-Label IHC Detection System

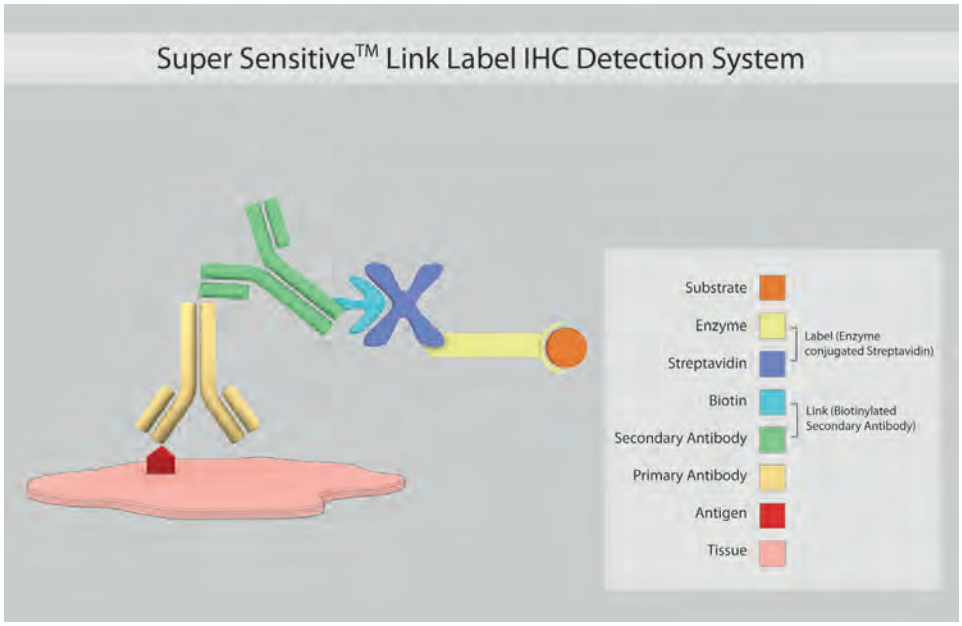
A classic system based on the highly specific and sensitive streptavidin-biotin interaction to detect a bound antibody. These kits include multi-Link – a mix of anti-mouse and anti-rabbit IgGs conjugated to multiple biotin molecules and a Label -Strepavidin conjugated with an enzyme (Horseradish peroxidase (HRP) or Alkaline Phosphatase (AP)). The reaction takes place in following steps:

1. Cells or tissues are prepared and incubated with an unlabeled primary antibody that will bind to the antigen.
2. The bound antibody is detected with a LINK (species-specific secondary antibody conjugated to biotin).
3. The bound secondary antibody is then allowed to react with Streptavidin conjugated with an enzyme (Label). Streptavidin binds extremely strongly and irreversibly to the biotin residues on the secondary antibody resulting in the addition of multiple enzyme to the primaryantibody complex.
4. A substrate is then added and acted upon by the enzyme producing a highly visible precipitate. DAB or AEC substrates are available for HRP Labels while Fast Red, Elegance Red and New Fuchsin substrates are available for AP conjugated labels

Features & Benefits:

- Improved staining of weak antigens
- User-friendly and extensive choice of kit formats designed for use with human, animal or rodent tissue
- Wide choice of chromogens offered
- Excellent cell penetration ability for intense nuclear, cytoplasmic and membrane antigen staining
- Available in barcode labeled (Xmatrx®, i6000™) vials for automation or in drop bottles for easy to use manual staining





Super Sensitive™ IHC Detection System kits Composition

For manual use (drop bottles)

For i6000™ Automation (Barcode labeled)

For Xmatrx® Automation (Elite - Barcode labeled vials)

Detection Systems - LINK LABEL (For mouse & rabbit antibodies)

SKU	Size	Multi-Link	Label	DAB buffer	DAB Chromogen	Peroxide block	Power block	Hematox.	Negative ctrl IgG
QA900-9LE	500 test	50 mL	AP 50 mL	-	-	-	-	-	-
QP900-9LE	500 test	50 mL	HRP 50 mL	-	-	-	-	-	-
QP300-XAKE	1000	100 mL	HRP 100 mL	-	-	-	-	-	-
LP000-ULE	1000+	5 mL (Conc.)	HRP 5 mL (Conc.)	-	-	-	-	-	-
LA000-ULE	1000+	5 mL (Conc.)	AP 5 mL (Conc.)	-	-	-	-	-	-

Detection Systems - Super Sensitive Polymer HRP (For mouse & rabbit antibodies)

SKU	Size	Super enhancer	Polymer-HRP	DAB buffer	DAB Chromo.	Peroxide block	Power block	Hematox.	EZ-AR Eleg. 1,2 & 3 Sol.	Negative ctrl IgG
QD400-60KE	60 test	6 mL	6 mL	10 mL	2 mL	6 mL	6 mL	6 mL	-	3 mL-Rabbit 3 mL-Mouse
QD420-YIKE	500 test	50 mL	50 mL	50 mL	5 mL	-	-	-	-	-
QD430-XAKE	1000 test	100 mL	100 mL	100 mL	10 mL	-	-	-	-	-
QD440-XAKE	1000 test	100 mL	100 mL	-	-	-	-	-	-	-
QD410-YAXE - i6000™	200 test	20 mL	20 mL	5x10 mL	4mL	20 mL	20 mL	20 mL	-	-
QD550-YCXE Xmatrx® -Infinity	200 test	15 mL	15 mL	5x11 mL	4 mL	4x16 mL	21 mL	21 mL	16 mL	-
QD550-YCDE Xmatrx®-Elite	200 test	16 mL	16 mL	4x11 mL + 5 barcode labeled vials	7 mL	3x16 mL	3x16 mL	3x16 mL	3x16 mL	-

Detection Systems - Super Sensitive One-Step Polymer-HRP (For mouse & rabbit antibodies)

SKU	Size	Polymer-HRP	DAB buffer	DAB Chromo.	Peroxide block	Power block	Hematox	EZ-AR Eleg. 1,2 & 3 Sol.
QD620-YIKE	500 test	50 mL	50 mL	5 mL	-	-	-	-
QD630-XAKE	1000 test	100 mL	100 mL	10 mL	-	-	-	-
QD610-YAXE - i6000™	200 test	16 mL	4x11 mL	4 mL	3x16 mL	3x16 mL	3x16 mL	-
QD610-YADE Xmatrx®-Elite	200 test	16 mL	4x11 mL + 5 barcode labeled vials	7 mL	3x16 mL	3x16 mL	3x16 mL	3x16 mL

IHC Detection Systems - Links / Labels items-Manual

Product	5 mL (Conc.)	6 mL (RTU)	50 mL (RTU)
SS AP label	HK321-UK	HK331-5K	HK331-9K
SS Goat Link	N/A	HK337-5G	N/A
SS HRP label	HK320-UK	HK330-5K	HK330-9K
SS Mouse Link	HK325-UM	HK335-5M	HK335-9M
SS Multi Link (ANTI-mouse & rabbit)	N/A	HK340-5K	HK340-9K
SS Rabbit Link	HK326-UR	HK336-5R	HK336-9R
SS Rat Link	N/A	HK338-5T	N/A
Conc. Multi Link	HK268-UK	N/A	N/A

Substrates and Chromogens

BioGenex offers complete Substrate Packs for immunohistochemical staining with alkaline phosphatase and peroxidase labels. The kits are designed to reduce substrate preparation time and minimize exposure to chemical hazards. The chart below summarizes the substrates offered, indicating enzyme and standard mounting media compatibility.

Features & Benefits:

- High Resolution AEC and Liquid DAB
- Rapid Development Time
- **Ready-to-Use** Solutions
- Long-Term Stability

The chart below summarizes the compatibility of mounting medium, chromogens and counterstains

Chromogen	Stain Color	Enzyme used	Solubility in Alcohol/Xylene	Compatible with Hematoxylin	Compatible Mounting Media
AEC	Brick Red	HRP	Yes	Yes	Aqueous or Super Mount
DAB	Brown	HRP	No	Yes	Aqueous, Super Mount or Xmount
Elegance Red	Red	AP	No	Yes	Aqueous, Super Mount or Xmount
Fast Red	Red	AP	Yes	Yes	Aqueous or Super Mount
New Fuchsin	Red	AP	Yes	Yes	Aqueous or Super Mount

IHC - Substrates and Chromogens Packs – Manual & Open system**

Product Name	60 Tests*	250 Tests*	500 Tests/Large*
Fast Red	NA	NA	HK182-5KE
Elegance Red	NA	NA	HK144-5KE
New Fuchsin (400 slides)	NA	NA	HK183-5KE
Two Component DAB (1000 slides)	NA	NA	HK542-XAKE
AEC	NA	HK092-5KE	N/A
AEC One Step Sol.	HK139-06K	NA	HK139-50K

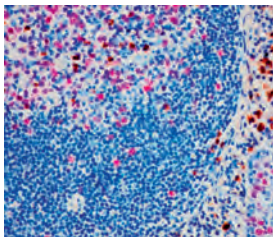
* 100 µl/test of prepared reagent
** Reagent vials for Xmatrx®& i6000™ open systems need to be purchased separately

Multi-Staining

Super Sensitive™ Antibody Cocktails

- Pre-mixed and pre-optimized antibody cocktails
- More patient data per slide – testing multiple protein biomarkers simultaneously
- Easy and fast – staining with a 4-step protocol
- Saving costs by maximizing resources
- Excellent sensitivity and high antibody efficiency

Ki67 + Lambda



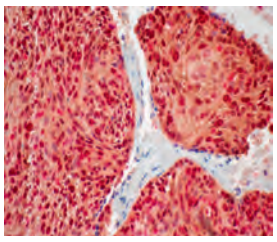
Tonsil stained with anti-Ki67 + Lambda

Source & Clone:	Mouse K-2 + Rabbit polyclonal
Isotype:	IgG + Polyclonal
Localization:	Nucleus, Cytoplasm
Pre-treatment:	AR Citra Plus/ EZ-AR 1/ EZ-AR 2
Manual/i6000:	HK081-5K
Xmatrx:	HX031-YCD/HX032-YCD

Ready-to-Use (Manual):	**AC562-5M**
Ready-to-Use (Automated) i6000™:	**AC562-10M**
Xmatrx®:	**AC562-YCD, AC562-50D**
Recommended Positive Control:	**Tonsil**

Ki67 is a nuclear protein present in cells at all phases of the cell cycle except G0. As such, Ki67 is a useful marker to identify the proliferation activity of cell populations. The staining of this activity, designated as the Ki67 labeling index, has shown to be clinically significant as a prognosis marker for breast, colorectal, skin cancer, and various lymphomas. The light chain is a polypeptide subunit of immunoglobulin expressed by B-cells. These B-cells are restricted to one of two subtypes of light chain, lambda or kappa. As a result, the light chain is a useful marker for lymphomas characterized as a monoclonal proliferation of B-cells. The Ki67 and lambda light chain cocktail is useful in evaluating cell proliferation of lambda light chain positive tumors.

p16 + Ki67



Cervical carcinoma stained with Anti-p16+Ki67

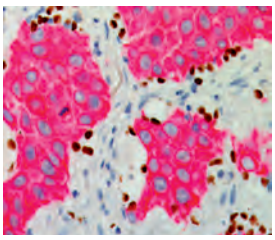
Source & Clone:	Mouse G175-405 + Rabbit EPR3611
Isotype:	IgG + IgG
Localization:	Nucleus and/or Cytoplasm, Nucleus
Pre-treatment:	AR Citra Plus
Manual/i6000:	HK080-5K
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AC601-5M**
Ready-to-Use (Automated) i6000™:	**AC601-10M**
Xmatrx®:	**AC601-YCD, AC601-50D**
Recommended Positive Control:	**FG-601C**
Recommended Barrier Control:	**FB-601C**

RUO

p16/INK4A is a tumor-suppressor protein. The related genetic and epigenetic abnormalities in genes controlling the G1 checkpoint can lead to both escape from senescence and cancer formation. Ki-67 is a nuclear protein that is associated with and may be necessary for cellular proliferation. p16/Ki-67 immunostains are helpful to assess cervical biopsies for HPV-associated lesions. For research use only, not for use in diagnostic procedures.

TTF-1 + GCDFP-15



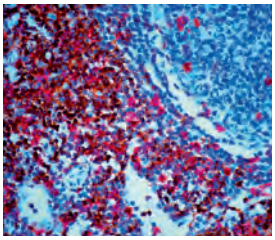
Lung squamous cell carcinoma stained with Anti-TTF1 +GCDFP-15

Source & Clone:	Mouse BGX-397A + Rabbit EP1582Y
Isotype:	IgG1 Kappa + IgG
Localization:	Nucleus, Cytoplasm
Pre-treatment:	AR Citra/EZ-AR 1/EZ-AR 2
Manual/i6000:	HK080-5K
Xmatrx:	HX031-YCD/HX032-YCD

Ready-to-Use (Manual):	**AC604-5M**
Ready-to-Use (Automated) i6000™:	**AC604-10M**
Xmatrx®:	**AC604-YCD, AC604-50D**
Recommended Positive Control:	**Lung squamous carcinoma**

Thyroid transcription factor-1 (TTF-1) is a sensitive marker for the diagnosis of primary pulmonary adenocarcinoma, and differentiation between poorly differentiated squamous cell carcinoma and small cell carcinoma and adenocarcinoma. Gross cystic disease fluid protein (GCDFP-15) is currently used as an immunohistochemical marker of breast cancer. TTF-1/GCDFP-15 immunohistochemical profile in lung tumors is highly suggestive of metastatic carcinoma of the breast. In distinguishing metastatic breast carcinoma and adenocarcinoma of the lung, the cytoplasmic staining would indicate breast carcinoma and nuclear staining would indicate lung or thyroid carcinoma.

CD4 + CD8



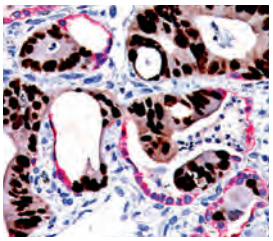
Tonsil stained with anti-CD4 + CD8

Source & Clone:	Mouse BC/1F6+Rabbit SP16
Isotype:	IgG1 + Rabbit IgG
Localization:	Membrane
Pre-treatment:	AR-10/EZ-AR 1/EZ-AR 2
Manual/i6000:	HK058-5K
Xmatrx:	HX031-YCD/HX032-YCD

Ready-to-Use (Manual):	**AC595-5M**
Ready-to-Use (Automated) i6000™:	**AC595-10M**
Xmatrx®:	**AC595-YCD**
Recommended Positive Control:	**Tonsil or mycois fungoides**

CD4 is a single chain transmembrane glycoprotein expressed on the surface of T helper cells and regulatory T-cells. CD4 is a co-receptor that assists the T-cell receptor (TCR) with an antigen-presenting cell. CD4 interacts directly with MHC class II molecules on the surface of the antigen-presenting cell. CD8 is a transmembrane glycoprotein that serves as a co-receptor for the T-cell receptor (TCR). The CD8 co-receptor is predominantly expressed on the surface of cytotoxic T-cells, but can also be found on natural killer cells and dendritic cells. CD8 binds to a major histocompatibility complex (MHC) molecule, but is specific for the class I MHC protein. CD4-CD8 double staining reveals the distribution of T-lymphocyte subsets, for example in HIV infection, infiltrating cells in graft rejection and lymphoma. Limited availability - Please inquire.

CDX-2 + CK7



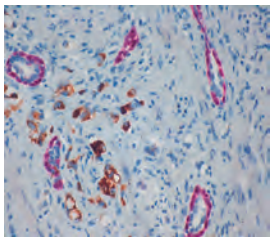
CDX2 and CK7 stained in colon cancer metastasized into lung tissue

Source & Clone:	Mouse CDX2-88 + Rabbit BC1
Isotype:	IgG1+ Rabbit IgG
Localization:	Nucleus, Cytoplasm
Pre-treatment:	AR Citra Plus/ EZ-AR 1/ EZ-AR 2
Manual/i6000:	HK081-5K
Xmatrx:	HX031-YCD/HX032-YCD

Ready-to-Use (Manual):	**AC596-5M**
Ready-to-Use (Automated) i6000™:	**AC596-10M**
Xmatrx®:	**AC596-YCD**
Recommended Positive Control:	**Colon, breast and lung cancer**

CDX-2, a member of the caudal-related homeobox family, is an intestine-specific transcription factor that regulates both proliferation and differentiation in intestinal epithelial cells. It plays an important role in triggering cells toward the phenotype of differentiated villus enterocytes as well as in the maintenance of the phenotype. CDX-2 is used as a marker for gastrointestinal differentiation, especially colorectal. Cytokeratin 7 is a 54kD intermediate filament protein found in a variety of glandularepithelia. Cytokeratin 7 has been found in columnar and glandular epithelium of the lung, cervix, breast, bile ducts and larger collecting ducts of the kidney. CDX-2 and CK7 combination will help to distinguish the tumor origin from gastrointestinal, especially colorectal to adenocarcinomas of lung, breast, endometrioid tumors, and transitional cell carcinoma of the bladder. Limited availability - Please inquire.

PIN4 (p63 + CK HMW + p504S)



Prostate carcinoma. stained with anti-PIN4

Source & Clone:	Mouse 4A4 + Mouse 34ßE12 + Rabbit 13H4
Isotype:	IgG
Localization:	p63 Nucleus, CK HMW and p504S Cytoplasm
Pre-treatment:	AR Citra Plus/EZ-AR 2
Manual/i6000:	HK081-5K
Xmatrx:	HX032-YCD

Ready-to-Use (Manual):	**AM448-5ME**
Ready-to-Use (Automated) i6000™:	**AM448-10ME**
Xmatrx®:	**AX448-YCDE, AX448-50DE**
Recommended Positive Control:	**Prostate adenocarcinoma**
Concentrated:	**MU448-UCE, MU448-UCE**

RUO

This antibody cocktail recognizes Prostate Intraepithelial Neoplasia (PIN) in the tissues stained by immunohistochemical techniques. A cocktail of these three antibodies might allow simultaneous demonstration of P504S, HMW CK and p63 using a single immunostain. The combination of P504S + HMW CK + p63 (PIN4 Cocktail) may be extremely useful for studying prostatic intraepithelial neoplasia, especially in difficult cases and in cases with limited tissue. For Research Use only, not for use in diagnostic procedures. For research use only. Not for use in diagnostic procedures.

Double Staining

BioGenex Double Staining IHC products include pre-optimized antibody cocktails and Super Sensitive multiple detection systems, enabling simultaneous testing of multiple antigens on single slide with a fast and easy protocol, assisting rapid and accurate diagnosis.

Super Sensitive™(SS) Double Staining Polymer Detection System

This double staining system is designed with novel polymer technology for fast and easy IHC staining of multiple antigens on a single slide. This system is pre-optimized for human tissues with superior sensitivity and specificity to produce precise and reliable results that allow easy interpretation and accurate diagnosis.

Features & Benefits:

- Pre-mixed and pre-optimized polymer cocktails
- Easy and fast – staining with a 4-step protocol
- Reduced costs by maximizing resources
- Clean and intense stain without endogenous biotin background
- Excellent sensitivity for weakly expressed antigens
- Excellent cell penetration ability for intense nuclear, cytoplasmic and membrane antigen staining
- Enabling higher dilution of antibodies for reduced cost
- Available in barcode labeled vials for Xmatrx® automation or in drop bottles for easy to use manual staining

SKU	Size	Anti-mouse Polymer-X	Anti-rabbit Polymer-Y	DAB buffer	DAB Chromo.	Peroxide block	Power block	Fast Red	Hematox	Negative ctrl IgG	EZ-AR Eleg. 1,2 & 3 Sol.
QS400-60KE	60 test	6 mL HRP	6 mL AP	10 mL	4 mL	12 mL	12 mL	20 mL A 20 mL B	-	6 mL Rb 6 mL Mo	-
QS200-60KE	60 test	6 mL AP	6 mL HRP	10 mL	4 mL	12 mL	12 mL	20 mL A 20 mL B	-	6 mL Rb 6 mL Mo	-
QS410-YIKE	500 test	50 mL HRP	50 mL AP	-	-	-	-	-	-	-	-
QS210-YIKE	500 test	50 mL AP	50 mL HRP	-	-	-	-	-	-	-	-
QS400-YADE Xmatrx®-Elite	100 test	7 mL HRP	7 mL AP	4 x 5 mL	3 mL	2x10 mL	2x10 mL	2x14 mL A 2x14 mL B	3x10 mL	7 mL Rb 7 mL Mo	3x7 mL
QS200-YADE Xmatrx®-Elite	100 test	7 mL AP	7 mL HRP	4 x 5 mL	3 mL	2x10 mL	2x10 mL	2x14 mL A 2x14 mL B	3x10 mL	7 mL Rb 7 mL Mo	3x7 mL

Substrates and Chromogens

BioGenex offers complete Substrate Packs for immunohistochemical staining with alkaline phosphatase and peroxidase labels. The kits are designed to reduce substrate preparation time and minimize exposure to chemical hazards. The chart below summarizes the substrates offered, indicating enzyme and standard mounting media compatibility.

Features & Benefits:

- High Resolution AEC and Liquid DAB
- Rapid Development Time
- Ready-to-Use Solutions
- Long-Term Stability

The chart below summarizes the compatibility of mounting medium, chromogens and counterstains

Chromogen	Stain Color	Enzyme used	Solubility in Alcohol/Xylene	Compatible with Hematoxylin	Compatible Mounting Media
AEC	Brick Red	HRP	Yes	Yes	Aqueous or Super Mount
DAB	Brown	HRP	No	Yes	Aqueous, Super Mount or Xmount
Elegance Red	Red	AP	No	Yes	Aqueous, Super Mount or Xmount
Fast Red	Red	AP	Yes	Yes	Aqueous or Super Mount
New Fuchsin	Red	AP	Yes	Yes	Aqueous or Super Mount

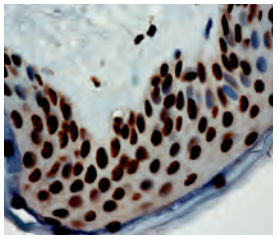
ISH Probes & Detection Systems

In situ Hybridization Probes

BioGenex offers fluorescein-labeled oligonucleotide probes for the detection of RNA or DNA by *in situ* Hybridization (ISH). These probes allow the localization of specific nucleic acid sequences within cells from formalin-fixed, paraffin-embedded tissue sections. When used with the BioGenex ISH Detection systems, these probes offer reliable, highly sensitive and easy-to-perform DNA and RNA assays.

IVD Products: Unless specified otherwise, all ISH Probes listed in this section are for In Vitro Diagnostics Use.

Alu II Probe

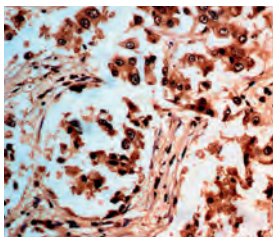


Alu sequence detected in FFPE tissue stained with DAB

Ready-to-Use (Manual): PR026-100E
Specificity: Alu II DNA
Ready-to-Use (Automated):
Xmatrx: PR026-YADE

Alu, an important group of widely distributed sequences repeated in the human genome, has been widely used in *in situ* hybridization technique.

Beta-Actin

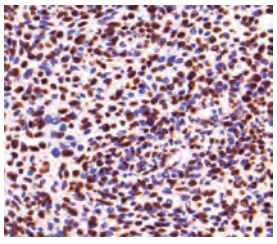


Beta actin mRNA staining of breast cancer tissue

Ready-to-Use (Manual): PR1055-100E
Specificity: Beta-Actin RNA
Ready-to-Use Automated):
Xmatrx: PR1055-YADE

Actins are highly conserved proteins that participate in cell motility as well as cell structure and integrity. In normal cells, beta-actin mRNA is localized in cell protrusions where actin is actively polymerized.

CerviPro HPV 14 DNA Probe

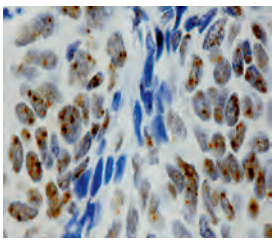


HPV 14 HR genotype in Ca Cervix tissue stained with DAB

Ready-to-use (Manual): PR251-100E
Specificity: HPV 14 genotypes
Ready-to-Use (Automated):
Xmatrx: PR251-YADE

The HPV 14 probe has been designed to specifically recognize regions of the L1 and E6/E7 open reading frames (ORFs) of human papillomavirus (HPV) 14 genotypes (HPV 16,18,31,33,35,39,45,51,52,56,58,59,66,68)in paraffin embedded human tissues or cytopathology specimens/cervical scraps.

CerviPro HPV Type 16/18 DNA Probe

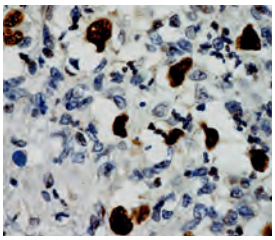


HPV16/18 in Ca Cervix stained with DAB

Ready-to-Use (Manual): PR250-100E
Specificity: HPV viral DNA sequences
Ready-to-Use (Automated):
Xmatrx: PR250-YADE

The CerviPro HPV Type 16/18 DNA probe has been designed to recognize regions of the E1, E6, L1, and L2 open reading frames (ORFs) of human papillomavirus (HPV) genotypes in paraffin embedded human tissues or cytopathology specimens/cervical scraps.

EBV-Encoded RNA (EBER) Probe

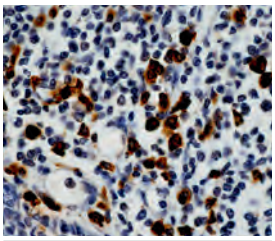


Epstein-Barr early RNA (EBER) stained with DAB

Ready-to-Use (Manual): PR205-100E
Specificity: EBV-encoded RNA
Ready-to-Use Automated):
Xmatrx: PR205-YADE

Epstein-Barr virus-encoded RNA, EBER, is present in cells latently infected with Epstein-Barr virus (EBV).

Kappa Probe



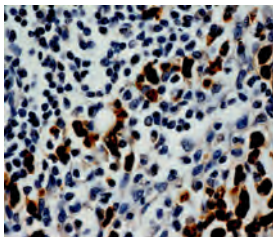
Human immunoglobulin kappa light chain mRNA in tonsil stained with DAB

Ready-to-Use (Manual): PR214-100E
Specificity: Kappa light chain mRNA
Ready-to-Use (Automated):
Xmatrx: PR214-YADE

The light chains of immunoglobulin molecules have two antigenic types: kappa and lambda. A given immunoglobulin molecule contains two identical light chains, either kappa or lambda. Therefore, the clonal nature of any immunoglobulin producing cell population can be determined by the light chain structure of the immunoglobulin that the cell produces.

*To be released soon

Lambda Probe

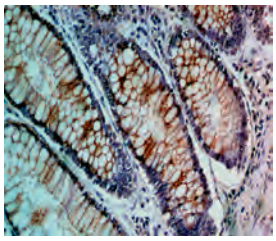


Ready-to-Use (Manual): PR215-100E
Specificity: Lambda light chain mRNA
Ready-to-Use (Automated):
Xmatrx: PR215-YADE

Human immunoglobulin lambda light chain mRNA in tonsil stained with DAB

The light chains of immunoglobulin molecules have two antigenic types: kappa and lambda. A given immunoglobulin molecule contains two identical light chains, either kappa or lambda. Therefore, the clonal nature of any immunoglobulin producing cell population can be determined by the light chain structure of the immunoglobulin that the cell produces.

Oligo d (T) Probe

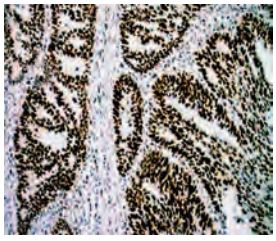


Ready-to-Use (Manual): PR217-100E
Specificity: mRNA
Ready-to-Use (Automated):
Xmatrx: PR217-YADE

Preservation of oligo d (T) mRNA in FFPE tissue stained with DAB

In all living cells, the expression of genetic information involves transcription of RNA molecules. The initial transcripts named heterogeneous nuclear RNA (hnRNA) are processed into mature messenger RNA (mRNA) by removing non-coding intron sequences and adding the 5'-methyl cap and a 3'-tail of approximately 200 adenylyl residues (poly (A)). In general, mRNA are conserved in routine formalin-fixed, paraffin-embedded tissues which have been fixed promptly. However, mRNA is not stable and may be destroyed during tissue processing of a routine formalin-fixed, paraffin-embedded tissue specimen. *in situ* hybridization with an oligo-d (T) probe is commonly used to assess the preservation of mRNA in a formalin-fixed, paraffin embedded tissue specimen.

Retinoblastoma (RB) Probe

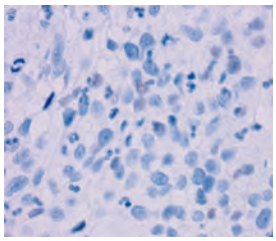


Ready-to-Use (Manual): PR225-100E
Specificity: retinoblastoma tumor suppressor gene
Ready-to-Use (Automated):
Xmatrx: PR225-YADE

Retinoblastoma mRNA in Adenocarcinoma tissue stained with DAB

The retinoblastoma tumor suppressor gene, RB, encodes a protein of 110 KD that plays an important role in cell growth regulation. Alterations in Retinoblastoma (RB) mRNA expression have been reported in many human tumor types including lung cancer, osteosarcomas, leukemias, prostate cancer and bladder cancer. Increased expression of RB1 mRNA has been reported for many human colon tumor tissues and human colorectal cancer cell lines and Breast cancer.

Scramble probe

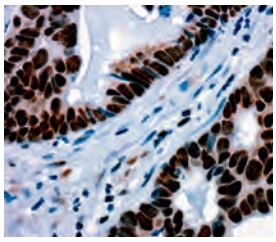


Ready-to-Use (Manual): PR032-100E
Specificity: Negative control for ISH assays

Negative staining of scrambled probe in FFPE tissue

The scramble probe sequence does not share homology with human mRNA or miRNA sequences available in the miR Base database. Scramble probe is used as a negative control during miRNA and ISH.

U6 probe



Ready-to-Use (Manual) PR031-100E
Specificity human U6 small nuclear RNA

U6 detected in FFPE tissue stained with DAB

U6 snRNA is the non-coding small nuclear RNA (snRNA) component of U6 snRNP (small nuclearribonucleoprotein). The U6 snRNA sequence is highly conserved and the function of the U6 snRNA has remained crucial and unchanged through evolution. The U6 cellular transcript is available in abundance with intranuclear distribution in cell/tissue. The U6 probe is designed to bind to human U6 small nuclear RNA.

ISH Probes

Probes for Automation are packaged with barcode labeled vials for staining up to 25 slides.
For a complete list of avaliable ISH probes refer to the table below.

Product Name	Pack Size	Intended Use	Cat. No. (Manual)	Cat. No. (Automated)
Alu II Probe	25 slides	Alu II sequences	PR026-100E	PR026-YADE
Beta Actin	25 slides	Initial standard	PR1055-100E	PR1055-YADE
CerviPro HPV 14	25 slides	L1 and E6/E7 ORFs of HPV14	PR251-100E	PR251-YADE
CerviPro HPV Type 16/18	25 slides	E1, E6, L1, and L2 open reading frames (ORFs) of HPV	PR250-100E	PR250-YADE
EBER Probe	25 slides	EBV-encoded RNA	PR205-100E	PR205-YADE
Kappa Probe	25 slides	Kappa light chain mRNA	PR214-100E	PR214-YADE
Lamda Probe	25 slides	Lambda light chain mRNA	PR215-100E	PR215-YADE
Oligo d (T) Probe	25 slides	mRNA	PR217-100E	PR217-YADE
Retinoblastoma (RB) Probe	25 slides	Retinoblastoma tumor suppressor gene	PR225-100E	PR225-YADE
ABL1	25 slides	v-abl Abelson murine leukemia viral oncogene homolog 1	PR261-100E	PR261-YADE
BCL2	25 slides	B-cell CLL/lymphoma 2	PR262-100E	PR262-YADE
BRAF	25 slides	v-raf murine sarcoma viral oncogene homolog B1	PR263-100E	PR263-YADE
JAK2	25 slides	Janus Kinase 2	PR264-100E	PR264-YADE
MYC	25 slides	v-myc myelocytomatosis viral oncogene homolog (avian)	PR265-100E	PR265-YADE
TNF	25 slides	tumor necrosis factor (TNF superfamily, member 2)	PR266-100E	PR266-YADE
TTF1	25 slides	transcription termination factor, RNA polymerase I	PR267-100E	PR267-YADE
ALK	25 slides	anaplastic lymphoma kinase (Ki-1)	PR268-100E	PR268-YADE
BRCA2	25 slides	breast cancer 2, early onset	PR269-100E	PR269-YADE
CD68	25 slides	CD68 antigen	PR270-100E	PR270-YADE
PCNA	25 slides	proliferating cell nuclear antigen	PR271-100E	PR271-YADE
MPO	25 slides	Myeloperoxidase	PR272-100E	PR272-YADE
MRC1	25 slides	Homo sapiens mannose receptor, C type 1	PR273-100E	PR273-YADE
ARG1	25 slides	Homo sapiens arginase 1	PR274-100E	PR274-YADE
ARG2	25 slides	arginase, type II	PR275-100E	PR275-YADE
COL1A1	25 slides	collagen, type 1, alpha 1	PR276-100E	PR276-YADE
SERPINE1	25 slides	Serine (or systeine) proteinase inhibitor, clade E	PR277-100E	PR277-YADE

* To be released soon

MicroRNA Probes

MicroRNAs (miRNAs) are endogenous, non-coding RNAs known to regulate gene expression by translational repression or RNA cleavage. Since miRNA has been observed to deregulate during progression of different cancer stages from normal to malignant and metastasis, the expression profile as a result of this deregulation can be exploited as a potential biomarker for cancer characterization.

IVD Products: Unless specified otherwise, all miRNA Probes listed in this section are for In Vitro Diagnostics Use.

BioGenex MicroRNA Probes

Automated and manual protocols and for standardized manual ISH staining

- Optimized for automated ISH staining by Xmatrx® ELITE
- Ready-to-Use reagents for FFPE tissues

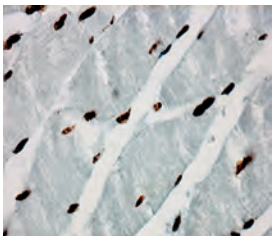
Highly Specific and Sensitive Probes

- Proprietary technology for clean intense stains
- *in situ* context of tissue morphology

Examples of BioGenex miRNA staining

For additional images and information, please visit us at www.biogenex.com or contact us to request a BioGenex miRNA catalog

Hsa-miR-1

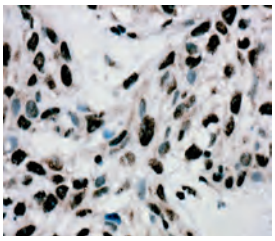


Hsa-miR-1 detected in FFPE tissue stained with DAB

Ready-to-Use (Manual):	HM001-100E
Specificity:	miR-1

The Hsa-miR-1probe has been designed from mature human miR-1 sequence. This fluorescenated probe is provided in a hybridization buffer for localization of miRNA in FFPE tissue by *in situ* hybridization.

Hsa-miR-222

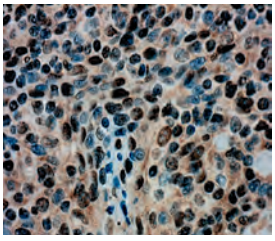


Hsa-miR 222 detected in FFPE tissue stained with DAB

Ready-to-Use (Manual):	HM222-100E
Specificity:	miR-222

The Hsa-miR-222 probe has been designed from mature human miR-222 sequence. This fluorescenated probe is provided in a hybridization buffer for localization of miRNA in FFPE tissue by *in situ* hybridization.

Hsa-miR-155

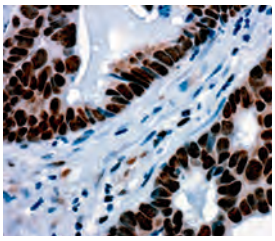


Has-miR 155 detected in FFPE tissue stained with DAB

Ready-to-Use (Manual):	HM155-100E
Specificity:	miR-155

The Hsa-miR-155 probe has been designed from mature human miR-155 sequence. This fluorescenated probe is provided in a hybridization buffer for localization of miRNA in FFPE tissue by *in situ* hybridization.

U6 probe



U6 detected in FFPE tissue stained with DAB

Ready-to-Use (Manual)	PR031-100E
Specificity	human U6 small nuclear RNA

U6 snRNA is the non-coding small nuclear RNA (snRNA) component of U6 snRNP (small nuclear ribonucleoprotein). The U6 snRNA sequence is highly conserved and the function of the U6 snRNA has remained crucial and unchanged through evolution. The U6 cellular transcript is available in abundance with intranuclear distribution in cell/tissue. The U6 probe is designed to bind to human U6 small nuclear RNA.

miRNA Probes

Product Name	Cat. No.
Hsa-miR-7a	HM007A-100E
Hsa-miR-Let-7c	HM007C-100E
Hsa-miR-7e	HM007E-100E
Hsa-miR-9	HM009-100E
Hsa-miR-10b	HM010B-100E
Hsa-miR-15a	HM015A-100E
Hsa-miR-17	HM017-100E
Hsa-miR-17-3p	HM017-3P-100E
Hsa-miR-18a	HM018A-100E
Hsa-miR-19b-3p	HM019B-3P-100E
Hsa-miR-21	HM021-100E
Hsa-miR-23b	HM023B-100E
Hsa-miR-27A	HM027A-100E
Hsa-miR-27b	HM027B-100E
Hsa-miR-29C	HM029C-100E
Hsa-miR-30C	HM030C-100E
Hsa-miR-30E	HM030E-100E
Hsa-miR-96	HM096-100E
Hsa-miR-101-3p	HM101-3P-100E
Hsa-miR-106a	HM106A-100E
Hsa-miR-125b	HM125B-100E
Hsa-miR-126	HM126-100E
Hsa-miR-127-3P	HM127-3P-100E
Hsa-miR-1285	HM1285-100E
Hsa-miR-133A	HM133A-100E
Hsa-miR-133B	HM133B-100E
Hsa-miR-135A	HM135A-100E
Hsa-miR-135B	HM135B-100E
Hsa-miR-141	HM141-100E
Hsa-miR-143	HM143-100E
Hsa-miR-144	HM144-100E
Hsa-miR-146B	HM146B-100E
Hsa-miR-147b	HM147B-100E
Hsa-miR-151a-3p	HM151A-3p-100E
Hsa-miR-152	HM152-100E
Hsa-miR-181C	HM181C-100E
Hsa-miR-182	HM182-100E
Hsa-miR-187	HM187-100E
Hsa-miR-191	HM191-100E
Hsa-miR-194	HM194-100E
Hsa-miR-196a	HM196A-100E
Hsa-miR-199a	HM199A-100E
Hsa-miR-200a	HM200A-100E
Hsa-miR-200b	HM200B-100E
Hsa-miR-200C	HM200C-100E
Hsa-miR-203A	HM203A-3P-100E
Hsa-miR-204	HM204-100E
Hsa-miR-205	HM205-100E

Product Name	Cat. No.
Hsa-miR-215	HM215-100E
Hsa-miR-216a	HM216A-100E
Hsa-miR-218	HM218-100E
Hsa-miR-221-3p	HM221-3P-100E
Hsa-miR-331-3p	HM331-3P-100E
Hsa-miR-335	HM335-100E
Hsa-miR-375	HM375-100E
Hsa-miR-378A	HM378A-100E
Hsa-miR-383	HM383-100E
Hsa-miR-412	HM412-100E
Hsa-miR-422A	HM422A-100E
Hsa-miR-423-3p	HM423-3P-100E
Hsa-miR-483	HM483-100E
Hsa-miR-505	HM505-100E
Hsa-miR-615	HM615-100E
Hsa-miR-622	HM622-100E
Hsa-miR-629	HM629-100E
Hsa-miR-641	HM641-100E
Hsa-miR-648	HM648-100E
Hsa-miR-663A	HM663A-100E
Hsa-miR-708	HM708-100E
Hsa-miR-1	HM001-100E
Hsa-miR-let-7b	HM007B-100E
Hsa-miR-let-7d	HM007D-100E
Hsa-miR-let-7g	HM007G-100E
Hsa-miR-15B	HM015B-100E
Hsa-miR-19a	HM019A-100E
Hsa-miR-20A	HM020A-100E
Hsa-miR-21-3p	HM021-3P-100E
Hsa-miR-22	HM022-100E
Hsa-miR-24-3P	HM024-3P-100E
Hsa-miR-26A	HM026A-100E
Hsa-miR-28-3P	HM028-3P-100E
Hsa-miR-28-5P	HM028-5P-100E
Hsa-miR-30B	HM030B-100E
Hsa-miR-31	HM031-100E
Hsa-miR-34A	HM034A-100E
Hsa-miR-650	HM0650-100E
Hsa-miR-92A	HM092A-100E
Hsa-miR-95	HM095-100E
Hsa-miR-98	HM098-100E
Hsa-miR-99A	HM099A-100E
Hsa-miR-99B	HM099B-100E
Hsa-miR-100	HM100E-100E
Hsa-miR-107	HM107-100E
Hsa-miR-1181	HM1181-100E
Hsa-miR-122	HM122-100E
Hsa-miR-124	HM124-100E

Product Name	Cat. No.
Hsa-miR-1247	HM1247-100E
Hsa-miR-125A	HM125A-100E
Hsa-miR-138	HM138-100E
Hsa-miR-142-3P	HM142-3P-100E
Hsa-miR-146a	HM146A-100E
Hsa-miR-148A	HM148A-100E
Hsa-miR-148B	HM148B-100E
Hsa-miR-149	HM149-100E
Hsa-miR-150	HM150-100E
Hsa-miR-153	HM153-100E
Hsa-miR-155	HM155-100E
Hsa-miR-181A	HM181A-100E
Hsa-miR-181B	HM181B-100E
Hsa-miR-1826	HM1826-100E
Hsa-miR-192	HM192-100E
Hsa-miR-195	HM195-100E
Hsa-miR-206	HM206-100E
Hsa-miR-210	HM210-100E
Hsa-miR-212	HM212-100E
Hsa-miR-214	HM214-100E
Hsa-miR-222	HM222-100E
Hsa-miR-224	HM224-100E
Hsa-miR-297	HM297-100E
Hsa-miR-328	HM328-100E
Hsa-miR-329	HM329-100E
Hsa-miR-361	HM361-100E
Hsa-miR-362	HM362-100E
Hsa-miR-365A-3P	HM365A-3P-100E
Hsa-miR-373	HM373-100E
Hsa-miR-409-3P	HM409-3P-100E
Hsa-miR-410	HM410-100E
Hsa-miR-424	HM424-100E
Hsa-miR-429	HM429-100E
Hsa-miR-449A	HM449A-100E
Hsa-miR-451	HM451-100E
Hsa-miR-486	HM486-100E
Hsa-miR-494	HM494-100E
Hsa-miR-497	HM497-100E
Hsa-miR-544	HM544-100E
Hsa-miR-545-5P	HM545-5P-100E
Hsa-miR-590	HM590-100E
Hsa-miR-610	HM610-100E
Hsa-miR-625	HM625-100E
Hsa-miR-627	HM627-100E
Hsa-miR-628	HM628-100E
Hsa-miR-630	HM630-100E
Hsa-miR-718	HM718-100E
Hsa-miR-802	HM802-100E

miRNA Probes

Product Name	Cat. No.
Hsa-miR-9500	HM9500-100E
Hsa-miR-16-5p	Inquire
Hsa-miR-451a	Inquire
Hsa-409-5p	Inquire
Hsa-miR-544a	Inquire
Hsa-miR-26b	Inquire
Hsa-miR-122	Inquire
Hsa-miR-183-3p	Inquire
Hsa-miR-198	Inquire
Hsa-miR-511	Inquire
Hsa-miR-337	Inquire
Hsa-miR-486-3p	Inquire
Hsa-miR-614	Inquire
Hsa-miR-216b	Inquire
Hsa-miR-23a	Inquire
Hsa-miR-24-2-5p	Inquire
Hsa-miR-6075	Inquire
Hsa-miR-7843	Inquire
Hsa-miR-802	Inquire
Hsa-miR-101	Inquire
Hsa-miR-138	Inquire
Hsa-miR-142	Inquire
Hsa-miR-193a-3p	Inquire
Hsa-miR-197	Inquire
Hsa-miR-217	Inquire
Hsa-miR-223	Inquire
Hsa-miR-140	Inquire
Hsa-miR-16	Inquire
Hsa-miR-186	Inquire
Hsa-miR-193b	Inquire
Hsa-miR-25	Inquire
Hsa-miR-338-3p	Inquire
Hsa-miR-1297	Inquire
Hsa-miR-381	Inquire
Hsa-miR-1258	Inquire
Hsa-miR-129	Inquire
Hsa-miR-132	Inquire
Hsa-miR-185	Inquire
Hsa-miR-34c	Inquire
Hsa-miR-7515	Inquire
Hsa-miR-136	Inquire
Hsa-miR-29a	Inquire
Hsa-miR-300	Inquire

Product Name	Cat. No.
Hsa-miR-296	Inquire
Hsa-miR-339	Inquire
Hsa-miR-374a	Inquire
Hsa-miR-379	Inquire
Hsa-miR-425	Inquire
Hsa-miR-450b-3p	Inquire
Hsa-miR-495	Inquire
Hsa-miR-502	Inquire
Hsa-miR-510	Inquire
Hsa-miR-517a-3p	Inquire
Hsa-miR-520	Inquire
Hsa-miR-574-3p	Inquire
Hsa-miR-638	Inquire
Hsa-miR-874	Inquire
Hsa-miR-183	Inquire
Hsa-miR-508-3p	Inquire
Hsa-miR-509-3p	Inquire
Hsa-miR-342-3p	Inquire
Hsa-miR-372	Inquire
Hsa-miR-944	Inquire
Hsa-miR-137	Inquire
Hsa-miR-184	Inquire
Hsa-miR-211	Inquire
Hsa-miR-376c	Inquire
Hsa-miR-532	Inquire
Hsa-miR-573	Inquire
Hsa-miR-1296	Inquire
Hsa-miR-130b	Inquire
Hsa-miR-154	Inquire
Hsa-miR-541	Inquire
Hsa-miR-29b-3p	Inquire
Hsa-miR-330	Inquire
Hsa-miR-374b	Inquire
Hsa-miR-4723	Inquire
Hsa-miR-642a	Inquire
Hsa-miR-765	Inquire
Hsa-miR-940	Inquire

Hybridization Detection System

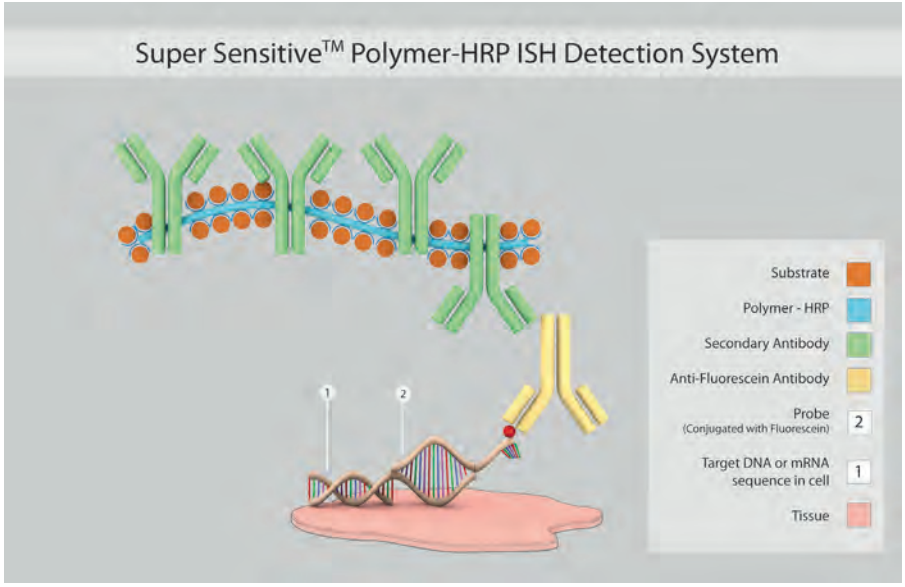
in situ Hybridization (ISH) is a powerful technique for detecting and localizing specific nucleic acid sequences within cells or tissues. This is achieved by the hybridization of a labeled probe to the specific RNA/DNA sequence within the cell and subsequent detection of the bound probe. ISH technique enables the semi-quantification of mRNA expression and helps determine the temporal and spatial patterns of gene expression in cells, tissue and whole animals. ISH technique can also be used for detection of intracellular pathogens with a very high degree of sensitivity.

Super Sensitive™ (Manual) & XISH (Xmatrx®) One-Step Polymer-HRP Detection System

This is a novel detection system using a non-biotin polymeric technology that makes use of Poly-HRP reagent. As the system is not based on the Biotin-Avidin System, problems associated with endogenous biotin are completely eliminated. The technology allows excellent cell penetration ability for intense staining, compared with other polymer HRPs.

Features & Benefits:

- Clean Stain without endogenous biotin background
- High signal to noise ratio for intense stain
- Universal system for all fluorescein labeled probes
- Available in barcode labeled (XISH kit) for Automation or in dropper bottles (Super Sensitive kit) for manual staining



ISH Detection Systems Composition

SKU	Size	α Fluor.	Polymer HRP	DAB buffer	DAB Chromo.	Peroxide block	Power block	Hematox	Prot. K	Hybrid. buffer	NAR-1	Washes A,B,E,F
DF400-25KE	25 test	2 mL	2 mL	5 mL	2 mL	3 mL	3 mL	3 mL	3 mL	6 mL	2 mL	10 mL
DF400-50KE	50 test	3 mL	3 mL	10 mL	2 mL	5 mL	5 mL	5 mL	5 mL	6 mL	3 mL	20 mL
DF400-YADE Xmatrx®-Elite	100 test	5 mL	5 mL	4x5 mL + 5 barcode labeled vials	7 mL	10 mL	10 mL	10 mL	5 mL	NA	5 mL	2x10 mL

Product	Size	Cat. No.	Description
NAR1	250 mL	HK873-5K	Microwave based nucleic acid retrieval for manula use only

Substrates and Chromogens

BioGenex offers complete Substrate Packs for immunohistochemical staining with alkaline phosphatase and peroxidase labels. The kits are designed to reduce substrate preparation time and minimize exposure to chemical hazards. The chart below summarizes the substrates offered, indicating enzyme and standard mounting media compatibility.

Features & Benefits:

- High Resolution AEC and Liquid DAB
- Rapid Development Time
- Ready-to-Use Solutions
- Long-Term Stability

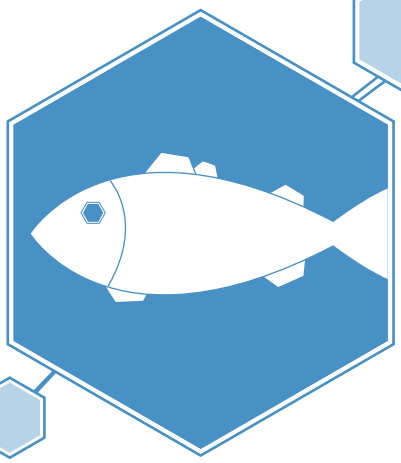
The chart below summarizes the compatibility of mounting medium, chromogens and counterstains

Chromogen	Stain Color	Enzyme used	Solubility in Alcohol/Xylene	Compatible with Hematoxylin	Compatible Mounting Media
AEC	Brick Red	HRP	Yes	Yes	Aqueous or Super Mount
DAB	Brown	HRP	No	Yes	Aqueous, Super Mount or Xmount
Elegance Red	Red	AP	No	Yes	Aqueous, Super Mount or Xmount
Fast Red	Red	AP	Yes	Yes	Aqueous or Super Mount
New Fuchsin	Red	AP	Yes	Yes	Aqueous or Super Mount

ISH - Substrates and Chromogens Packs – Manual & Open system**

Product Name	60 Tests*	250 Tests*	500 Tests*/Large
Fast Red	NA	NA	HK182-5KE
Elegance Red	NA	NA	HK144-5KE
New Fuchsin (400 slides)	NA	NA	HK183-5KE
Two Component DAB (BUFFER+CHROMOGEN) (1000 slides)	NA	NA	HK542-XAKE
AEC (BUFFER+CHROMOGEN)	NA	HK092-5KE	HK092-YAKE
AEC (Concentrated BUFFER+CHROMOGEN)	NA	NA	HK129-YAKE
AEC One Step Sol.	HK139-06K	NA	HK139-50K

* 100 µL/test of prepared reagent
** Reagent vials for Xmatrx®& i6000™ open systems need to be purchased separately



eFISHiency

eFISHiency

Fluorescence *in situ* hybridization (FISH) is a robust cytogenetic technique used for the detection of chromosomal aberrations viz., deletions, amplification and translocation in tissue sections or within individual cells in native context. In this technique florescent probes bind to the target sequence of DNA chromosome. High specificity and sensitivity coupled with rapid and accurate result has proven the role of FISH in both research and diagnosis of solid tumor and hematological malignancies. FISH is also used in genetic counseling, medicine and species identification. FISH can also be used to detect and localize specific RNA targets in cells, circulating tumor cells and tissue samples.

In an FISH procedure, fixed tissue sections/cytology specimens are pretreated to expose target DNA or mRNA sequences. An appropriately labeled probe is hybridized to the exposed target in the cells, followed by stringency washing steps to remove non-specifically bound probe. Subsequently slides are mounted using DAPI/antifade and can be visualized under fluorescence microscope using appropriate filter set.

eFISHiency: Comprehensive high-throughput automated FISH processing systems

BioGenex offers the eFISHiency system, a complete solution for cytogenetic FISH laboratory requirements under one umbrella, consisting of eFISH probes, pretreatment kits and high-throughput automated/semi-automated platforms.

Sr #	eFISHiency	Components	Description
1	eFISH probes	FISH probes covering major genetic aberrations	Probes for detection and diagnosis of genetic aberrations
2	eFISH kits	eFISH Histo	eFISH kit for histology FFPE tissue samples
		eFISH Cyto	eFISH kit for cytology specimens
3	eFISH processing systems	Xmatrx® ELITE	World's only high-throughput front end FISH processing system that process FISH slides from microtome to microscope including final coverslipping. 40 different protocols in combination of histology and cytology specimens/ probes can be processed at a time.
		Xmatrx® NANO VIP	10 slides semi-automated work station for small size FISH laboratory requirement with provision of manual pipetting of FISH probes, DAPI and costly reagents. 10 different protocols in combination of histology and cytology specimens/ probes can be processed at a time
		Xmatrx® MINI	10 slides manual FISH processing platform with provision of on board pretreatment, dewaxing and washing. 10 different protocols in combination of histology and cytology specimens/probes can be processed at a time

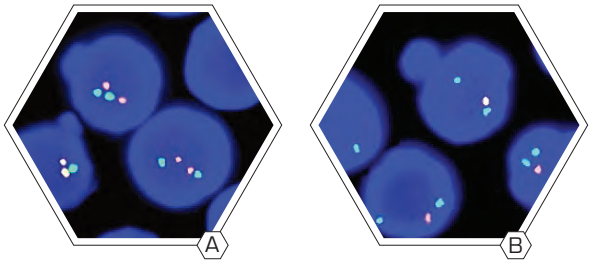
IVD Products: Unless specified otherwise, all FISH Probes listed in this section are for In Vitro Diagnostics Use.

eFISHiency Integrated System a Game Changer...

• Affordable • Reproducible • Reliable

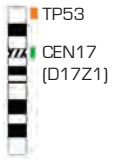
DELETION

eFISH TP53 / CEN17



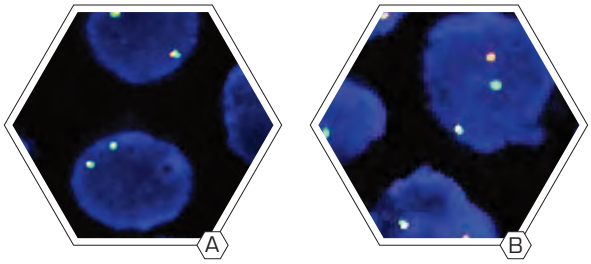
A. Normal interphase cells showing two orange and two green signals in each nucleus.

B. Bone marrow tissue with deletion of the TP53 gene as indicated by one orange signal and two green signals in each nucleus.



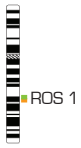
BREAK APART

eFISH ROS1



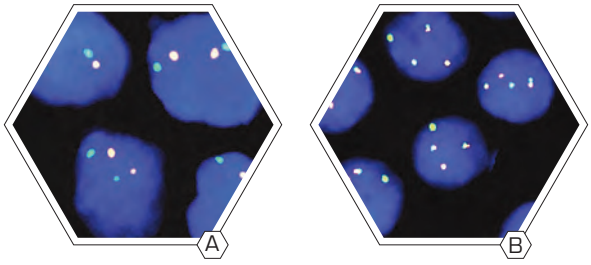
A. Normal interphase cells showing two orange/green fusion signals (yellow) in each nucleus.

B. Paraffin embedded NSCLC cells showing one orange/green fusion signal (non-rearranged). One orange signal, and one green signal indicating translocation of ROS1.



FUSION

eFISH BCR / ABL

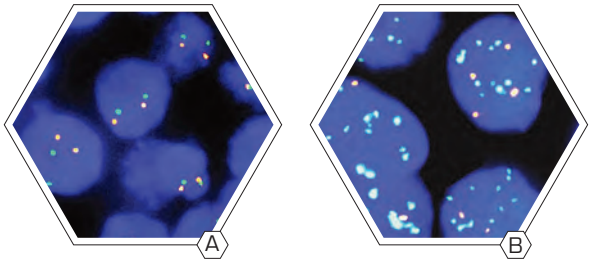


A. Normal interphase cells showing two orange and two green signals in each nucleus.

B. Bone marrow biopsy tissue with translocation affecting the BCR/ABL loci as indicated by one orange signal, one green signal and two orange/green fusion signals.

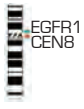
COPY NUMBER

eFISH FGFR1 / CEN8



A. Normal interphase cells showing two orange and two green signals in each nucleus.

B. Lung carcinoma tissue showing amplification of the FGFR1 gene (green) and partly polysomy 8 (orange).



eFISH Oncology Probes

Product Description	Probe Type	Colors	Cat. No. (10 Tests)	Cat. No. (20 Tests)
eFISH 1p36/1q25	Gene Deletion	• / •	FP044-10XE	FP044-20XE
eFISH 19q13/19p13	Gene Deletion	• / •	FP045-10XE	FP045-20XE
eFISH ALK	Breakapart	• / •	FP056-10XE	FP056-20XE
eFISH CHOP	Breakapart	• / •	FP050-10XE	FP050-20XE
eFISH CMYC/CEN 8	Copy Number	• / •	FP065-10XE	FP065-20XE
eFISH COL1A1	Breakapart	• / •	FP054-10XE	FP054-20XE
eFISH COL1A1/PDGFB	Dual Fusion	• / •	FP052-10XE	FP052-20XE
eFISH EGFR/CEN 7	Copy Number	• / •	FP040-10XE	FP040-20XE
eFISH EWSR1	Breakapart	• / •	FP048-10XE	FP048-20XE
eFISH FGFR1/CEN 8	Copy Number	• / •	FP042-10XE	FP042-20XE
eFISH FGFR2/CEN 10	Copy Number	• / •	FP055-10XE	FP055-20XE
eFISH FOXO1	Breakapart	• / •	FP077-10XE	FP077-20XE
eFISH FUS	Breakapart	• / •	FP058-10XE	FP058-20XE
eFISH HER2/CEN17	Copy Number	• / •	FP039-10XE	FP039-20XE
eFISH MDM2/CEN 12	Copy Number	• / •	FP038-10XE	FP038-20XE
eFISH MET/CEN 7	Copy Number	• / •	FP047-10XE	FP047-20XE
eFISH NMYC/2q11	Copy Number	• / •	FP043-10XE	FP043-20XE
eFISH p16/CEN 9	Gene Deletion	• / •	FP041-10XE	FP041-20XE
eFISH PDGFB	Breakapart	• / •	FP053-10XE	FP053-20XE
eFISH PIK3CA/CEN 3	Copy Number	• / •	FP059-10XE	FP059-20XE
eFISH RB1/13q12	Gene Deletion	• / •	FP079-10XE	FP079-20XE
eFISH RET	Breakapart	• / •	FP061-10XE	FP061-20XE
eFISH ROS1	Breakapart	• / •	FP060-10XE	FP060-20XE
eFISH SYT	Breakapart	• / •	FP049-10XE	FP049-20XE
eFISH TERT/5q31	Copy Number	• / •	FP066-10XE	FP066-20XE
eFISH TFE3	Breakapart	• / •	FP051-10XE	FP051-20XE
eFISH TP53/CEN 17	Gene Deletion	• / •	FP062-10XE	FP062-20XE
eFISH VHL/CEN 3	Gene Deletion	• / •	FP046-10XE	FP046-20XE

eFISH Hematology Probes

Product Description	Probe Type	Colors	Cat. No. (10 Tests)	Cat. No. (20 Tests)
eFISH ALK	Breakapart	• / •	FP056-10XE	FP056-20XE
eFISH AML1/ETO	Dual Fusion	• / •	FP072-10XE	FP072-20XE
eFISH BCL2/IGH	Dual Fusion	• / •	FP074-10XE	FP074-20XE
eFISH BCL6	Breakapart	• / •	FP080-10XE	FP080-20XE
eFISH BCR/ABL	Dual Fusion	• / •	FP071-10XE	FP071-20XE
eFISH BIRC3/MALT1	Dual Fusion	• / •	FP075-10XE	FP075-20XE
eFISH CCND1	Breakapart	• / •	FP069-10XE	FP069-20XE

Product Description	Probe Type	Colors	Cat. No. (10 Tests)	Cat. No. (20 Tests)
eFISH CCND1/CEN 11	Copy Number	• / •	FP063-10XE	FP063-20XE
eFISH CCND1/IGH	Dual Fusion	• / •	FP057-10XE	FP057-20XE
eFISH CMYC	Breakapart	• / •	FP064-10XE	FP064-20XE
eFISH CMYC/CEN 8	Copy Number	• / •	FP065-10XE	FP065-20XE
eFISH CMYC/IGH	Dual Fusion	• / •	FP067-10XE	FP067-20XE
eFISH D13S319/ 13q34/CEN 12	Copy Number	• / • / •	FP078-10XE	FP078-20XE
eFISH EGR1/5p15	Gene Deletion	• / •	FP068-10XE	FP068-20XE
eFISH ETV6	Breakapart	• / •	FP083-10XE	FP083-20XE
eFISH ETV6/RUNX1	Dual Fusion	• / •	FP076-10XE	FP076-20XE
eFISH IGH	Breakapart	• / •	FP070-10XE	FP070-20XE
eFISH p16/CEN 9	Gene Deletion	• / •	FP041-10XE	FP041-20XE
eFISH PDGFRB	Breakapart	• / •	FP081-10XE	FP081-20XE
eFISH PML/RARA	Dual Fusion	• / •	FP073-10XE	FP073-20XE
eFISH RB1/13q12	Gene Deletion	• / •	FP079-10XE	FP079-20XE
eFISH TERT/5q31	Copy Number	• / •	FP066-10XE	FP066-20XE
eFISH TP53/CEN 17	Gene Deletion	• / •	FP062-10XE	FP062-20XE

eFISH Enumeration Probes

Product Description	Probe Type	Colors	Cat. No. (10 Tests)	Cat. No. (20 Tests)
eFISH 1p12	Copy Number	•	FP084-10XE	FP084-20XE
eFISH 2q11	Copy Number	•	FP085-10XE	FP085-20XE
eFISH CEN 3	Copy Number	•	FP086-10XE	FP086-20XE
eFISH 4p11	Copy Number	•	FP087-10XE	FP087-20XE
eFISH CEN 6	Copy Number	•	FP088-10XE	FP088-20XE
eFISH CEN 7	Copy Number	•	FP089-10XE	FP089-20XE
eFISH CEN 8	Copy Number	•	FP090-10XE	FP090-20XE
eFISH CEN 9	Copy Number	•	FP091-10XE	FP091-20XE
eFISH CEN 10	Copy Number	•	FP092-10XE	FP092-20XE
eFISH CEN 11	Copy Number	•	FP093-10XE	FP093-20XE
eFISH CEN 12	Copy Number	•	FP094-10XE	FP094-20XE
eFISH 13q12	Copy Number	•	FP095-10XE	FP095-20XE
eFISH CEN 13/ CEN 18/CEN 21	Copy Number	• / • / •	FP096-10XE	FP096-20XE
eFISH CEN 17	Copy Number	•	FP097-10XE	FP097-20XE
eFISH CEN 18	Copy Number	•	FP098-10XE	FP098-20XE
eFISH 21q22	Copy Number	•	FP099-10XE	FP099-20XE
eFISH CEN X	Copy Number	•	FP100-10XE	FP100-20XE
eFISH CEN Yq12	Copy Number	•	FP101-10XE	FP101-20XE
eFISH CEN X/Yq12	Copy Number	• / •	FP102-10XE	FP102-20XE

eFISH pretreatment kits

eFISH Histo is designed to meet the FISH processing requirement of FFPE tissues while eFISH Cyto is designed for cytology and hematology specimens. Kits contain buffers and reagents for pretreatment and post hybridization stringency washes and are compatible on automation platforms: Xmatrx® ELITE, Xmatrx® NANO VIP and Xmatrx® MINI.

Product	SKU	Size	EZ-AR2	Liquid Pepsin (RTU)	Wash buffer 1 (10x)	Wash buffer 2 (10x)	Reagent A	Fixing solution
eFISHHisto	DF500-20XE	20 test	5 mL	7 mL (Histo)	200 mL	NA	12 mL	3 mL
eFISHCyto	DF510-20XE	20 test	NA	7 mL (Cyto)	200 mL	200 mL	NA	20 mL

Product	Cat. No.	Size	Description
NAR1	HK873-5K	250 mL	Microwave based nucleic acid retrieval for manula use only

eFISH Processing systems

True eFISHiency

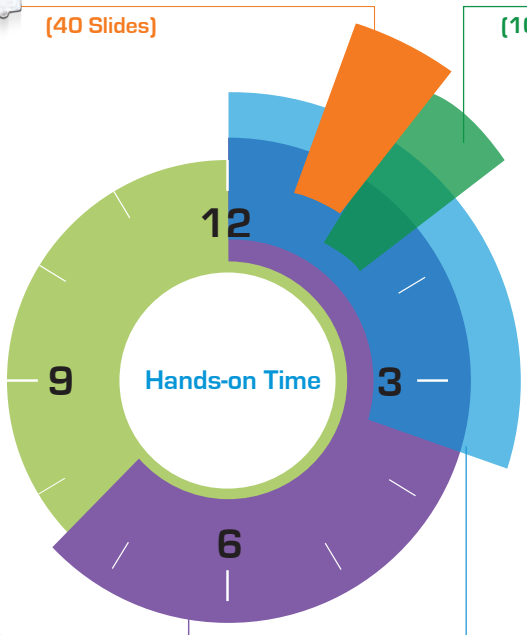
Now FISH can be the nexus of a more efficient and more productive laboratory. With a family of Xmatrx® systems, you have the freedom to attend to more demanding tasks while delivering high-quality and standardized results every time.

30 Minutes
(40 Slides)

Xmatrx® ELITE
3 Steps

< 30 Minutes
(10 Slides)

NanoVIP®
3 Steps



7.5 Hours
(10 Slides)

33 Steps

3.5 Hours
(10 Slides)

Xmatrx® MINI
33 Steps

Rethink the way FISH fits into your workflow

Xmatrx® ELITE

Microtome to Microscope

- The world's first and only fully automated front-end FISH processing system
- Run up to 40 slides under multiple protocols
- Reduce hands-on tech time from 7.5 hours to 30 minutes

33 Steps Reduced to 3

Load ➡ Click ➡ View

NanoVIP®

eFISHiency System for FISH Automation

- On-board dewaxing, oil seal and final coverslip after DAPI
- Run 10 different protocols at the same time

33 Steps Reduced to 3

Load ➡ Click ➡ View

Xmatrx® MINI

eFISHiency Workstation

- eFISHiency Workstation for manual FISH assay
- Hybridizer with eXACT™ temperatures
- 10 Independently programmable thermal cyclers
- Built-in touch screen display
- Manual coverslip application and removal

Accessories

Oil stamp

Coverslip stand

Suction pen

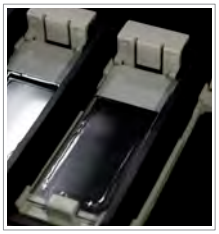
Family of Xmatrx® Systems to Provide Optimum Workflow Solutions for Your Laboratory Needs

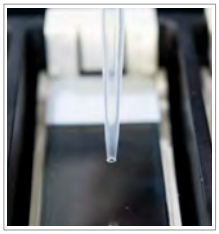
With superior staining quality and enhanced laboratory productivity in mind, we have developed a family of Xmatrx® Systems to produce standardized results and provide optimum workflow solutions for your laboratory needs by:

• Streamlining lab workflow • Increasing throughput • Improving reproducibility • Freeing up critical resources

Xmatrx® ELITE

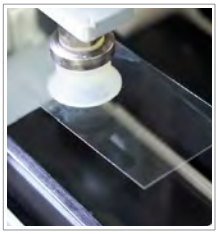

Placement of slides on eXACT™ temperature controlled blocks


Automated application of oil for sealing reaction chamber (micro-chamber)


Automated dispensing of micro-reagents (proteinase, probe and DAPI)

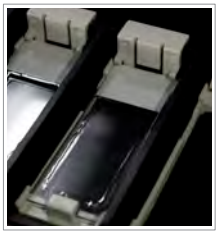

Automated application and removal of coverslips


Automated wash and airblow to dry slides


Automated mounting and final coverslip after DAPI

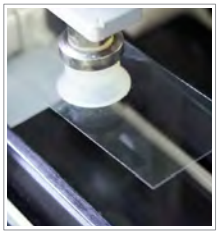
NanoVIP®


Placement of slides on eXACT™ temperature controlled blocks


Automated application of oil for sealing reaction chamber (micro-chamber)


Automated application and removal of coverslips

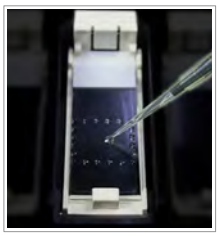

Automated wash and airblow to dry slides

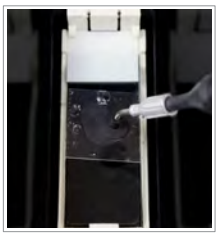

Automated mounting and final coverslip after DAPI

Xmatrx® MINI


Placement of slides on eXACT™ temperature controlled blocks


Manual application of oil with anoil stamp for sealing reaction chamber [micro-chamber]


Manual dispensing of micro-reagents (proteinase, probe and DAPI)

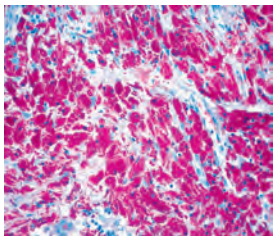

Manual application and removal of coverslips with a suction pen


Manual wash and dry with aid of heat


Manual mounting and coverslip after DAPI

Special Stains

Acid Fast Bacteria (AFB) Blue Stain

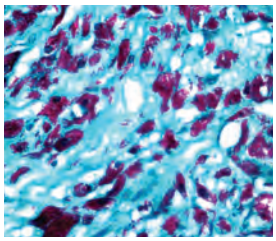


Lung tissue infected with Mycobacterium tuberculosis

Cat. No. (Xmatrx):	SS025-50X
Specificity:	*Mycobacterium tuberculosis*
Expected Results:	Red (Acid fast bacilli) and Blue (non-acid fast bacteria)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System. The Acid Fast Stain is for demonstration of mycobacteria, especially *Mycobacterium tuberculosis*, in tissue sections and smears. Mycobacteria are difficult to demonstrate by other staining techniques due to the fatty acid capsule surrounding the organism. This fatty acid covering influences the degree to which stains may penetrate and subsequently be removed. Acid Fast staining may be used for the demonstration of mycobacteria including M. tuberculosis, M. kansasii, M. avium, and M. leprae. Tuberculosis (TB) remains a major health threat, especially in developing countries.

Acid Fast Bacteria (AFB) Green Stain

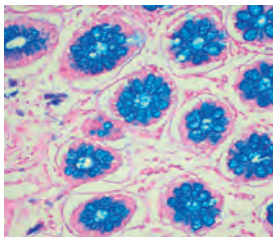


Lung tissue infected with Mycobacterium tuberculosis

Cat. No. (Xmatrx):	SS059-50X
specificity:	Mycobacterium spp
Expected Results:	Acid fast bacilli stains red while the background stains green

Mycobacteria are difficult to demonstrate by other staining techniques due to the fatty acid capsule surrounding the organism. This fatty acid covering influences the degree to which stains may penetrate and subsequently be removed. Acid Fast staining may be used for the demonstration of mycobacteria including M. tuberculosis, M. kansasii, M. avium, and M. leprae. Tuberculosis (TB) remains a major health threat, especially in developing countries. A major cause of death in AIDS patients in Africa is TB. M. kansasii and M. avium are also frequently responsible for opportunistic infections in these AIDS patients. Acid Fast remains one of the most common stains used.

Alcian Blue/PAS Stain (i6000™/manual)

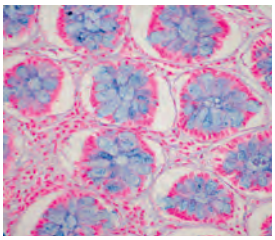


Alcian Blue staining of colon tissue

Cat. No. (Xmatrx):	SS026-50X
Cat. No. (i6000/manual):	SS020
Specificity:	Neutral and acidic mucosubstances
Expected Results:	Acid mucins stain blue, neutral mucins stain magenta, mixtures of mucins stain blue/purple; nuclei stain deep blue

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Alcian Blue PAS is a combined method utilizing the properties of both the PAS and Alcian Blue methods to demonstrate the full complement of tissue proteoglycans. Alcian Blue offers comprehensive staining for acid mucins at pH 2.5. The staining results are insoluble in water or alcohol and do not fade appreciably over time. Neutral mucins which are solely PAS positive will subsequently be demonstrated in a contrasting manner. Where mixtures occur, the resultant colour will depend upon the dominant moiety.

Alcian Blue pH 2.5 Stain

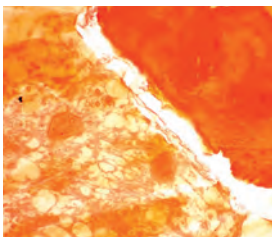


Alcian blue staining of colon tissue

Cat. No. (Xmatrx):	SS027-50X
Cat. No. (i6000/manual):	SS012
Specificity:	Acid mucins and mucopoly-saccharides
Expected Results:	Acid mucopoly-saccharides stain blue; nuclei stain pink to red; cytoplasm stains pale pink

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Alcian Blue offers comprehensive staining for acid mucins and stains very intensely over a varying pH range. Strongly sulphated mucins stain below pH 1.0, weakly sulfated mucins stain at pH 2.5 and above, while sialomucins (depending on their type) stain between pH 1.5 and 3.2. Alcian Blue is a water soluble, high molecular weight, copper phthalocyanin basic dye. This Alcian Blue kit stains mucins at pH 2.5. The staining results are insoluble in water or alcohol and do not fade appreciably over time.

Alizarin Red Stain

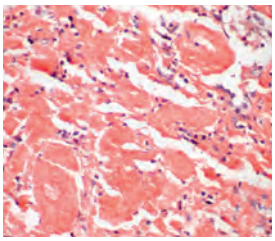


Calcium deposits in bone tissue

Cat. No. (Manual):	SS052-50K
Specificity:	Calcium in tissue section
Expected Results:	Calcium deposits stain orange-red

This product is intended for *in vitro* diagnostic use and is used to identify calcium in tissue sections. Calcium forms an Alizarin Red S-calcium complex in a chelation process and the reaction is birefringent. The reaction is not strictly specific for calcium, since magnesium, manganese, barium, strontium, and iron may interfere, but these elements usually do not occur in sufficient concentration to interfere with the staining.

Amyloid (Congo Red) Stain

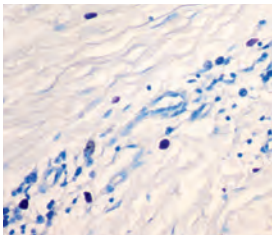


Amyloid staining of liver tissue

Cat. No. (Xmatrx):	SS028-50X
Cat. No. (i6000/manual):	SS003
Specificity:	Amyloid in tissue sections
Expected Results:	Amyloid stains red to deep pink; nuclei stain blue; elastic fibers stain light pink

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Amyloids are insoluble fibrous protein aggregates that erroneously interact with one another or other cell components forming insoluble fibrils. Abnormal accumulation of amyloid fibrils in organs may lead to amyloidosis and play a role in various neurodegenerative disorders. Amyloid deposits are extracellular and may become sufficiently large to cause damage to surrounding tissues. Congo Red is the gold standard method for diagnosis of amyloidosis. When stained with Congo Red and viewed through polarizing lenses amyloid will birefringe an apple green color under the microscope.

Azure A Stain

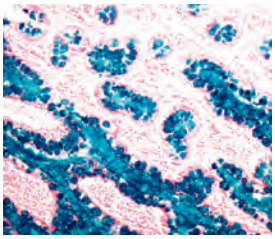


Azure A staining of mast cells in skin tissue

Cat. No. (Xmatrx):	SS038-50X
Cat. No. (i6000/manual):	SS038
Specificity:	Mast cells in skin tissue (neurofibroma)
Expected Results:	Mast cell granules stain purple; Nuclei stain blue; Background stains pale blue

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Mast cells are normally present in small numbers in the connective tissue of all organs, but particularly in the dermal layer of skin and are identified by their cytoplasmic granules. Increased numbers of mast cells are found in many pathological conditions. Mast cell hyperplasia in the skin (mastocytosis) manifests with skin lesions and may present with symptoms of urticaria and flushing due to the chemical mediators released during mast cell degranulation.

Colloidal Iron Stain



Collodal Iron staining of adeno carcinoma of intestine

Cat. No. (Xmatrx):	SS054-50X
Cat. No. (i6000/manual):	SS054
Specificity:	Carboxylated and sulfated mucopoly-saccharides and glycoproteins
Expected Results:	Acid mucopoly-saccharide and sialomucins appear deep blue, nuclei appear pink-red and cytoplasm appears pink

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated System and also for i6000 staining. The Colloidal Iron Stain Kit is used for the demonstration of carboxylated and sulfated mucopoly-saccharides and glycoproteins and is suitable for any well-fixed paraffin embedded tissue cut at 5 microns. Colloidal ferric ions are, at low pH, absorbed principally by carboxylated and sulfated mucosubstances.

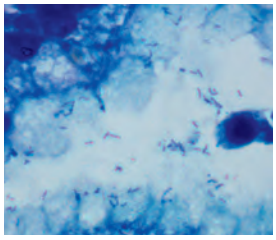
Elastic Stain

Elastic fibers in aorta tissue

Cat. No. (Xmatrx):	SS029-50X
Specificity:	Staining of elastin in tissue sections
Expected Results:	Elastic fibers (shades of dark blue); Collagen fibers (shades of red); Nuclei (shades of blue to black); Other tissue elements (shades of yellow)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System. The elastic staining procedure can demonstrate the characteristics of emphysema (i.e., atrophy of elastic tissue), arteriosclerosis (i.e., thinning and loss of elastic fibers) and various other vascular diseases.

Giemsa Stain

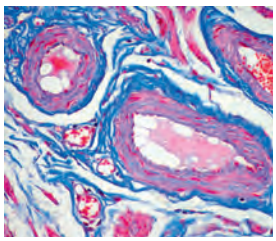


Giemsa stain for H.pylori in tissue sections

Cat. No. (Xmatrx):	SS049-50X
Cat. No. (i6000/manual):	SS016
Specificity:	*Helicobacter pylori*
Expected Results:	Helicobacter pylori and nuclei stain dark blue, and cytoplasm stains pink

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. It is recognized that *Helicobacter pylori* is the cause of most stomach and duodenal ulcers. Approximately 95% of persons with gastric ulcers and 100% of persons with chronic gastritis have this bacterium within the stomach. The organism has not been found in healthy persons. Those without stomach ulcers or gastritis. *H. pylori* are known to bind to the O blood-group structure (a particular series of sugars) present in gastric epithelial cells.

Gomori's Trichrome Blue Stain

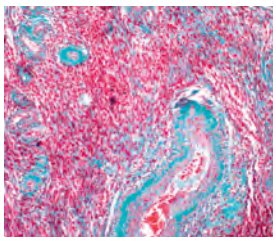


Gomoris Trichrome staining of Fallopian tube

Cat. No. (Xmatrx):	SS033-50X
Cat. No. (i6000/manual):	SS033
Specificity:	Muscle and collagen fibers
Expected Results:	Muscle fibers stain red; Collagen stains blue; Nuclei stain blue-black

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Trichrome stains have historically been used to distinguish collagen from muscle tissue. The term "trichrome" refers to a mix of three stains. These dyes stain nucleus, collagen and cytoplasm structures and are often in mordents such as phosphotungstic or phosphomolybdic acid. Use of trichrome stain may be useful in the study of diseases of connective tissue and muscle characterized by fibrotic and dystrophic changes and to differentiate between collagen and smooth muscle in tumors.

Gomori's Trichrome Green Stain

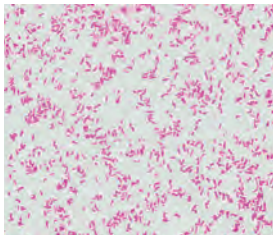


Gomori's Trichrome staining of Fallopian tube

Cat. No. (Xmatrx):	SS034-50X
Cat. No. (i6000/manual):	SS034
Specificity:	Muscle and collagen fibers
Expected Results:	Nuclei (blue), Collagen (green), Muscle Fiber (red)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Trichrome stains have historically been used to distinguish collagen from muscle tissue. The term "trichrome" refers to a mix of three stains. These dyes stain nucleus, collagen and cytoplasm structures and are often in mordants such as phosphotungstic or phosphomolybdic acid. Use of trichrome stain may be useful in the study of diseases of connective tissue and muscle characterized by fibrotic and dystrophic changes and to differentiate between collagen and smooth muscle in tumors.

Gram Stain

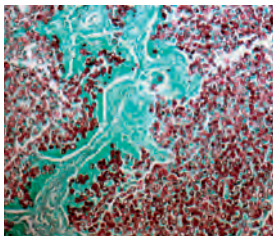


Gram staining of gram-negative bacilli

Cat. No. (Xmatrx):	SS037-50X
Cat. No. (i6000/manual):	SS015
Specificity:	Gram positive and Gram negative microorganisms
Expected Results:	Gram positive-(blue), Gram-negative (pink to red)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. The Gram Stain procedure continues to be one of the initial screening tests for detecting bacteria in wounds, sputum, pus, tissues, etc. Although the exact chemical nature of the method is yet to be established, it is known that Gram positive organisms, staining a deep blue color, have a cell wall containing teichoic acid, while Gram negative organisms, staining a red-pink color, have cell walls containing lipopolysaccharides.

Grocott's Methenamine Silver (GMS) for Fungi Stain

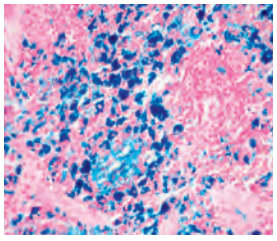


GMS staining for fungi in tissue sections

Cat. No. (Xmatrx):	SS042-50X
Cat. No. (i6000/manual):	SS017
Specificity:	Fungi in tissue sections
Expected Results:	Fungi stain gray to black with a light green background

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Human bodies are regularly exposed to fungi spores from many species. Patients with a diminished or compromised immune system show greater susceptibility and incidence of fungal infections. Some fungi may elicit a range of host reactions from oxidative, necrotising to granulomatous. Other fungi produce little cellular response to indicate their presence. Most fungi are relatively large and their cell walls are rich in polysaccharide. These polysaccharides can be oxidized to di-aldehydes and detected with Schiff's reagent or silver solution.

Iron Stain

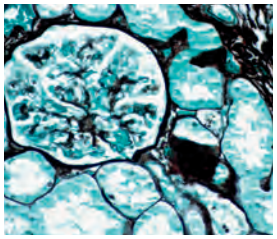


Spleen tissue with iron deposits

Cat. No. (Xmatrx):	SS030-50X
Cat. No. (i6000/manual):	SS010
Specificity:	Detection of ferric iron in tissue sections, and blood or bone marrow films
Expected Results:	Iron (bright blue); Nuclei (red); Cytoplasm (pink)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Small amounts of ferric iron may be found in bone marrow and spleen. Very large deposits may be seen in conditions such as hemachromatosis and hemosiderosis.

Jones' Basement Membrane Stain

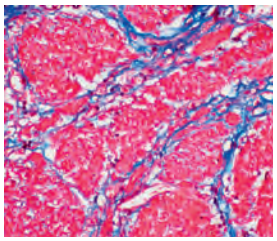


Jones' basement membrane staining of kidney with glomeri

Cat. No. (Xmatrx):	SS058-50X
Specificity:	Basement membrane
Expected Results:	Basement membrane (black); Nuclei (red); Background (pink)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated System and also for i6000 staining. Hematoxylin and Eosin stained sections of most tissue do not distinguish between basement membranes well. In disorders such as membranous nephropathy or diabetes the basement membranes in the glomerulus become more conspicuous. Jones' Basement Membrane stain kit is used to identify basement membranes, specifically glomerular and tubular membranes in renal tissue.

Masson's Trichrome Stain

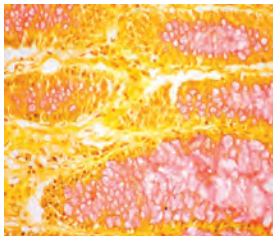


Masson's Trichrome staining of stomach tissue

Cat. No. (Xmatrx):	SS035-50X
Cat. No. (i6000/manual):	SS008
Specificity:	Muscle and collagen fibers
Expected Results:	Collagen (blue); Nuclei (black); Muscle, cytoplasm, keratin (red)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Trichrome stains have historically been used to distinguish collagen from muscle tissue. The term "trichrome" refers to a mix of three stains. These dyes often stain nucleus, collagen and cytoplasm structures in mordants such as phosphotungstic or phosphomolybdic acid. Use of Masson's trichrome stain may be useful in the study of diseases of connective tissue and muscle characterized by fibrotic and dystrophic changes and to differentiate between collagen and smooth muscle in tumors.

Mucicarmine Stain

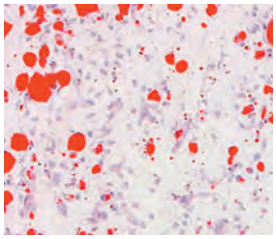


Mucicarmine staining of small intestine

Cat. No. (Xmatrx):	SS036-50X
Cat. No. (i6000/manual):	SS006
Specificity:	Mucopoly-saccharides
Expected Results:	Mucins (deep rose); Nuclei (black); Other tissue elements (yellow)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Mucicarmine preferentially stains mucin with strong staining of epithelial mucins and poor staining of mucins of fibroblastic origin. Staining results may be used to identify primary tumor sites, distinguishing mucin-negative undifferentiated squamous cell lesions from mucins-positive adenocarcinomas and staining capsule of Cryptococcus.

Oil Red O Stain

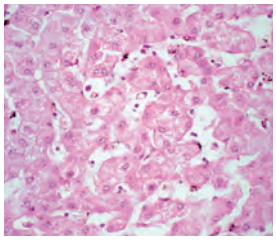


Oil Red O staining of fat containing tissue

Cat. No. (Xmatrx):	SS043-50X
Cat. No. (i6000/manual):	SS021
Specificity:	Fat staining on frozen sections
Expected Results:	Fat (red); Nuclei (blue)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Oil Red O stain is an oil soluble dye used to evaluate normal or abnormal fatty tissue. Abnormal deposits of fatty emboli may develop after a bone fracture or an injury that crushes fatty tissue.

Periodic Acid-Schiff (PAS) Diastase Stain

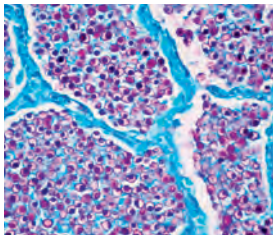


PAS Diastase staining of liver tissue

Cat. No. (Xmatrx):	SS039-50X
Cat. No. (i6000/manual):	SS001
Specificity:	PAS stains specifically glycogen, glycoproteins, mucopoly-saccharides, basement membrane and mucin.
Expected Results:	Nuclei stain blue; glycogen and other carbohydrates stain red to pink; No stained glycogen seen in diastase-digested tissue

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. PAS is a stain that typically gives a magenta color in the presence of glycogen. Diastase is an enzyme that breaks down glycogen into smaller sugar units, maltose and glucose that are washed out of the section. Differences in the intensities of the two stains (PAS and PAS-D) can be attributed to different glycogen concentrations and can be used to semi-quantify glycogen in samples.

Periodic Acid-Schiff (PAS) for Fungi Stain

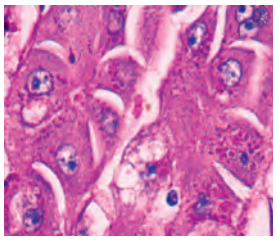


PAS staining of fungi in lung tissue

Cat. No. (Xmatrx):	SS053-50X
Cat. No. (i6000/manual):	SS022
Specificity:	PAS for Fungi is specific for fungal organisms in tissue sections
Expected Results:	Fungi stain rose and background stains green to blue

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. PAS for fungi is a staining method used to identify fungi in formalin-fixed and paraffin-embedded tissues or autopsy tissues. Polysaccharides present in fungal cell walls are oxidized by the periodic acid to aldehydes. The aldehydes react with the Schiff reagent to yield rose-colored staining of fungi.

Periodic Acid-Schiff (PAS) Stain (without Diastase)

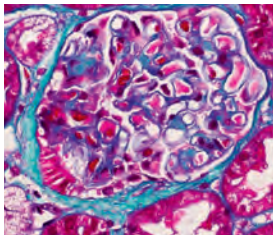


PAS staining of liver tissue

Cat. No. (Xmatrx):	SS032-50X
Cat. No. (i6000/manual):	SS002
Specificity:	Glycogen glycoproteins; Mucopoly-saccharides; Basement membrane and mucin
Expected Results:	Glycogen (red-purple); Background (blue)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. The PAS reaction in tissue sections is useful for outlining tissue structures such as basement membranes, capsules and blood vessels. This staining procedure may also be used for the demonstration of fungal organisms in tissue sections. PAS staining is mainly used for staining structures containing a high proportion of carbohydrate macromolecules (glycogen, glycoprotein, proteoglycans) typically found in connective tissues, mucus, the glycocalyx, and basal laminae.

Renal Masson's Trichrome Stain

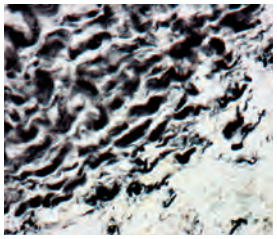


Renal Masson's Trichrome staining of kidney

Cat. No. (Xmatrx):	SS050-50X
Cat. No. (i6000/manual):	SS050
Specificity:	Collagen
Expected Results:	Fibrinoid and immune deposits appear red; Basement membrane & collagen stain green and nuclei stain blue

Trichrome stains have historically been used to distinguish collagen from muscle tissue. The term "trichrome" refers to a mix of three stains. These dyes often stain nucleus, collagen and cytoplasm structures in mordants such as phosphotungstic or phosphomolybdic acid.

Reticulin/No Counterstain

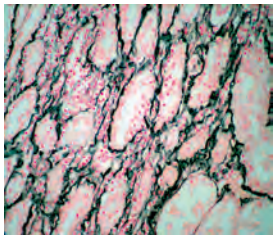


Reticulin staining of liver tissue

Cat. No. (Xmatrx):	SS046-50X
Cat. No. (i6000/manual):	SS046
Specificity:	Reticular fibers
Expected Results:	Reticulin stains black without any counter stain

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Ammonical silver stains are common methods for the demonstration of reticular fibers. These procedures may be used for the differential diagnosis of tumors such as carcinomas, sarcomas and lymphosarcomas.

Reticulin/Nuclear Fast Red Stain

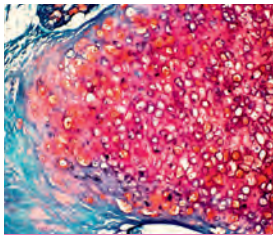


Reticulin staining of kidney tissue

Cat. No. (Xmatrx):	SS047-50X
Cat. No. (i6000/manual):	SS011
Specificity:	Reticular fibers
Expected Results:	Reticulin stains black with a pink to rose background

Ammonical silver stains are common methods for demonstration of reticular fibers. These procedures may be used for the differential diagnosis of tumors such as carcinomas, sarcomas and lymphosarcomas.

Safranin O Stain

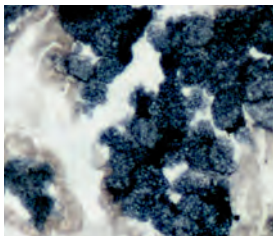


Safranin O staining of cartilage

Cat. No. (Xmatrx):	SS040-50X
Cat. No. (i6000/manual):	SS040
Specificity:	Cartilage, mucin, and mast cell granules
Expected Results:	Nuclei stain black, cytoplasm stains gray-green green, cartilage, mucin & mast cell granules stain orange to red

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Safranin O staining is used for the detection of cartilage, mucin, and mast cell granules on formalin-fixed paraffin-embedded and frozen tissue sections. In this staining, cartilage and mucin stain orange to red, nuclei stain black and the background is stained gray green. Safranin O is used to demonstrate any changes that occur in articular diseases.

Sudan Black B Stain

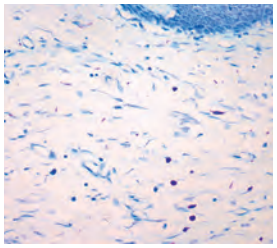


Fat in frozen sections stained by Sudan black B

Cat. No. (Xmatrx):	SS041-50X
Cat. No. (i6000/manual):	SS019
Specificity:	Sudan Black B staining procedure is used to demonstrate neutral lipids and phospholipids in frozen tissue sections
Expected Results:	Fat stains blue-black and nuclei stain red

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Sudan Black B is a classical dye used for studying lipids in tissue sections. Sudan black B stain is used to differentiate fat cell tumors (liposarcomas) from other types of tumors. Abnormal deposits of fatty emboli may develop after a bone fracture or an injury that crushes fatty tissue. The fat stain may verify that an emboli caused death. When cell membranes or myelin degenerate, fatty substances may be formed and can be detected with this stain.

Toluidine Blue Stain

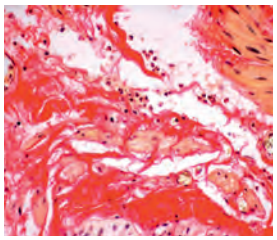


Toluidine blue staining of mast cells in skin tissue

Cat. No. (Xmatrx):	SS057-50X
Cat. No. (i6000/manual):	SS057
Specificity:	Mast cell
Expected Results:	Mast cell granules and carboxylated mucins (purple); Nuclei (blue); Background (pale blue)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System. Mast cells normally present in the connective tissue of all organs are increased in many pathological conditions. Mast cell granules which are refractile and not readily identified in H&E stained sections are well demonstrated by the Toluidine blue staining method.

Van Gieson Stain

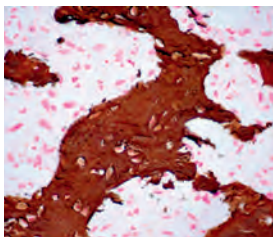


Van Gieson staining of stomach tissue

Cat. No. (Xmatrx):	SS044-50X
Cat. No. (i6000/manual):	SS044
Specificity:	Collagen and smooth muscle in tumors
Expected Results:	Nuclei (blue/black); Collagen (red); Cytoplasm, muscle fibrin and red blood cells (yellow)

This product is intended for *in vitro* diagnostic use on the BioGenex Xmatrx Automated Staining System and also for i6000 staining. Van Gieson Stain is used to differentiate between collagen and smooth muscle in tumors and to demonstrate the increase of collagen in diseases. This method combines two or more anionic dyes and relies on differential binding by tissue components. The differentiation is determined by a combination of differences in the relative size of the dye molecules, differences in the physical structure of the tissue, and differences in the amino acid composition of tissue elements.

Von Kossa Stain



Von Kossa staining of calcified node

Cat. No. (Manual):	SS045-50K
Specificity:	Calcium salts in tissue sections
Expected Results:	Calcium salts (black or brown black); Nuclei (red) & cytoplasm (pink)

This product is intended for *in vitro* diagnostic use to demonstrate deposits of calcium in tissues. Abnormal deposits of calcium may be found in any area of the body. With the H&E stain, calcium appear deep blue-purple. Von Kossa staining is specific for demonstrating deposits of calcium or calcium salt and is not specific for the calcium ion itself. When tissue sections are treated with a silver nitrate solution, the silver is deposited by replacing the calcium, reduced by the strong light, and thereby visualized as metallic silver. Additional methods are sometimes employed along with this technique to confirm the presence of calcium such as Alizarin Red, which detects calcium deposits.

Special Stains (Xmatrx®, i6000™ and Manual Use)

Product Name	50 Tests - i6000™/manual	50 Tests - Xmatrx®
Acid-Fast Bacteria (AFB) Blue Stain	N/A	SS025-50X
Acid-Fast Bacteria (AFB) Green Stain	N/A	SS059-50X
Alcian Blue/PAS Stain	SS020	SS026-50X
Alcian Blue pH 2.5 Stain	SS012	SS027-50X
Alizarin Red Stain (manual use only)	SS052-50K	N/A
Amyloid (Congo Red) Stain	SS003	SS028-50X
Azure A Stain	SS038	SS038-50X
Colloidal Iron Stain	SS054	SS054-50X
Elastic Stain	N/A	SS029-50X
Giemsa Stain	SS016	SS049-50X
Gomori's Trichrome Blue Stain	SS033	SS033-50X
Gomori's Trichrome Green Stain	SS034	SS034-50X
Gram Stain	SS015	SS037-50X
Grocott's Methenamine Silver (GMS) Stain	SS017	SS042-50X
Iron Stain	SS010	SS030-50X
Jones' Basement Membrane Stain	N/A	SS058-50X
Masson's Trichrome Stain	SS008	SS035-50X
Mucicarmine Stain	SS006	SS036-50X
Oil Red O Stain	SS021	SS043-50X
Periodic Acid-Schiff (PAS) Diastase Stain	SS001	SS039-50X
Periodic Acid-Schiff (PAS) for Fungi Stain	SS022	SS053-50X
Periodic Acid-Schiff (PAS) Stain (without Diastase)	SS002	SS032-50X
Renal Masson's Trichome Stain	SS050	SS050-50X
Reticulin/No Counterstain	SS046	SS046-50X
Reticulin/Nuclear Fast Red Stain	SS011	SS047-50X
Safranin O Stain	SS040	SS040-50X
Sudan Black B Stain	SS019	SS041-50X
Toluidine Blue Stain	SS057	SS057-50X
Van Gieson Stain	SS044	SS044-50X
von Kossa Stain (manual use only)	SS045-50K	N/A

IVD Products: Unless specified otherwise, all Special Stains listed in this section are for In Vitro Diagnostics Use.

Consumables & Ancillary Reagents

Buffers and Diluents

Buffers and diluents are available for Immunohistochemistry, *in situ* Hybridization Special Stains and most other applications.

- General buffers, such as PBS (pH 7.6) and TBS (pH 7.6, 0.1 M) can be used for washing/rinsing of slides.
- Super Sensitive™ Wash Buffer is phosphate buffered saline (pH 7.4) with surfactant and is used to ensure optimal staining with even spreading of antibodies and other reagents to avoid inconsistent results.
- Common Antibody Diluent and Enhanced Antibody Diluent have been developed for use with all antibodies in immunohistochemistry and have been specifically optimized for use with BioGenex antibodies and reagent products. These diluents enable enhancement of signal-to-noise ratio of staining when used optimally and also help in maintaining the antibody specificity and stability. The Enhanced Antibody Diluent, in addition to all the above features, contains chemical compounds to enhance antigen-antibody interaction and affinity. In order to achieve desired staining pattern and intensity, the titers of antibodies or concentrations of reagents may need to be optimized. These diluents are also for diluting concentrated Alkaline Phsophatase (AP) labels but are not suitable for diluting Horseradish Peroxidase (HRP) labels because they contain Sodium Azide.
- Streptavidin Peroxidase Diluent, was developed especially for diluting concentrated HRP labels and does not contain Sodium Azide.
- Link Diluent, was developed for diluting concentrated Link (Biotinylated Anti-Immunoglobulins) antibodies

Buffers - Manual & Automation

Product Name	500 mL(20x)
Phosphate Buffered saline	HK091-9K
Super Sensitive Wash Buffer	HK583-5K
X-Wash Buffer, 20X for Xmatrx®	HX020-YIK
Tris Buffer	HK098-9K
Tris Buffer (Wash Buffer) 3/Pack (dries powder to make 3L)	HK098-5K

Diluents- Manual

Product Name	100 mL(RTU)
Common Antibody Diluent	HK156-5K
Enhanced Antibody Diluent	HK941-YAK
Link Diluent	HK165-5K
Streptavidin Peroxidase Diluent	HK157-5K

Blocking Reagents

• **Peroxide Block:** Endogenous peroxidase is most commonly encountered in red blood cells, kidney, and liver tissue. Peroxide Block should be used prior to application of primary antibody when Horseradish Peroxidase (HRP) is used as the labeling enzyme, and if it is necessary to block endogenous peroxidase activity in the tissue being stained.

• **Power Block™:** This is a blocking reagent for reducing nonspecific background in immunoassays. A truly universal block, it is suitable for use in immunohistochemistry, immunocytochemistry, ELISA methods, and immunogold techniques. The Power Block™ reagent contains buffer, casein and preservative and also works well as an antibody diluent and washing medium.

• **Protein Block:** This can be used to reduce background staining due to non-specific binding of the primary or secondary antibodies to the tissue. Protein Block should be applied immediately prior to the primary antibody.

• **Avidin/Biotin Blocking Kit:** Certain tissues especially liver, kidney, and GI tract are rich in biotin. Use of the Avidin/Biotin Blocking kits ensures the blocking of all endogenous biotin, biotin receptors, or avidin binding sites present in the tissue. Pre-treatment of tissues with avidin blocking should always be followed with biotin blocking.

Blocking Reagents-Manual/Open System*

Product Name	6 mL(RTU)	50 mL(RTU)	100 mL(10X)
Peroxide Block	HK111-5K	HK111-50K	NA
Protein Block (Normal Goat Serum)	HK112-5K	HK112-9K	NA
Protein Block (Normal Rabbit Serum)	HK114-5K	NA	NA
Power Block	HK083-5K	HK083-50K	HK085-50K
Avidin/Biotin Blocking Kit	HK102–5KE	NA	NA

* Reagent vials for Xmatrx®& i6000™ open systems need to be purchased separately.

Substrates and Chromogens

BioGenex offers complete Substrate Packs for immunohistochemical staining with alkaline phosphatase and peroxidase labels. The kits are designed to reduce substrate preparation time and minimize exposure to chemical hazards. The chart below summarizes the substrates offered, indicating enzyme and standard mounting media compatibility.

Features & Benefits

- High Resolution AEC and Liquid DAB
- Rapid Development Time
- Ready-to-Use Solutions
- Long-Term Stability

IHC - Substrates and Chromogens Packs – Manual & Open system**

Product Name	60 Tests*	250 Tests*	500 Tests/Large*
Fast Red	NA	NA	HK182-5KE
Elegance Red	NA	NA	HK144-5KE
New Fuchsin (400 slides)	NA	NA	HK183-5KE
Two Component DAB (BUFFER+CHROMOGEN) (1000 slides)	NA	NA	HK542-XAKE
AEC (BUFFER+CHROMOGEN)	NA	HK092-5KE	HK092-YAKE
AEC (Concentrated BUFFER+CHROMOGEN)	NA	NA	HK129-YAKE
AEC One Step Sol.	HK139-06K	NA	HK139-50K

* 100 µL/test of prepared reagent
** Reagent vials for Xmatrx®& i6000™ open systems need to be purchased separately

The chart below summarizes the compatibility of mounting medium, chromogens and counterstains.

Chromogen	Stain Color	Enzyme used	Solubility in Alcohol/Xylene	Compatible with Hematoxylin	Compatible Mounting Media
AEC	Brick Red	HRP	Yes	Yes	Aqueous or Super Mount
DAB	Brown	HRP	No	Yes	Aqueous, Super Mount or Xmount
Elegance Red	Red	AP	No	Yes	Aqueous, Super Mount or Xmount
Fast Red	Red	AP	Yes	Yes	Aqueous or Super Mount
New Fuchsin	Red	AP	Yes	Yes	Aqueous or Super Mount

Counterstains and Mounting Media

BioGenex offers the following counterstains for use in Immunohistochemistry, *in situ* Hybridization and other applications with either manual or automated staining systems.

• Mayer's hematoxylin is a blue stain that does not contain alcohol and therefore is compatible with both alcohol soluble non-permanent chromogens (AEC, Fast Red & New Fuchsin) and alcohol-insoluble chromogens (DAB & Elegance Red). It is alcohol and xylene insoluble and therefore compatible with most clearing agents and mounting media.

• DAPI (4',6-diamidino-2-phenylindole) is a fluorescent blue stain used as nuclear counterstain in Fluorescent *In Situ* Hybridization (FISH) and Immunofluorescence (IF) applications. DAPI strongly binds A-T rich regions in DNA andcan be used to stain nuclei of both live and fixed cells. DAPI has an absorption maximum at a wavelength of 358 nm and its emission maximum is at 461 nm.

Product Name	1 mL(RTU)	6 mL(RTU)	250 mL (RTU)
Hematoxylin, Mayer's (IHC, ISH)	NA	HK100-5K	HK100-9K
DAPI in Mounting Medium (FISH,IF)	HK606-10K	NA	NA

Mounting of all stained biological specimens is an essential step before their microscopic evaluation. Mounting also enables the slides to be archived for long periods of time. The mounting medium may be used to attach a coverslip or may itself serve as a coverslip substitute. The choice of mounting medium depends on whether long-term or short-term preservation is desired, and whether the mounting procedure is chemically compatible with the chromogen and the counterstain.

• SuperMount®Permanent Mounting Medium is a polymer based aqueous mounting media that does not require the use of a coverslip. This innovative, patented mounting medium (BioGenex's U.S. Patent No. 5,492,837) is designed to preserve biological specimens for long-term storage. SuperMount® medium is compatible with most aqueous and organic-soluble dyes and chromogens including AEC, DAB, Elegance Red, Fast Red, New Fuchsin, BCIP/NBT, Rhodamine, Fluorescein, Texas Red, Phycoerythrin, Phycocyanin, and Fat Stain (Oil Red O). The refractive index of SuperMount® yields greater transparency and clarity of specimens to be examined under the microscope. SuperMount® can be used for the mounting of all biological specimens, including stained tissue sections, Cytospin preparations, and blood smears.

• Aqueous Mounting Medium is glycerol-based mounting medium that require the use of a coverslip. It is intended for short-term specimen storage and is compatible with most chromogens and counterstains.

• XMount™ Mounting Medium is a permanent mounting medium that has been optimized for use with BioGenex™ instrument for all BioGenex detection systems for immunohistochemistry (IHC), In Situ Hybridization (ISH) and special stains. XMount™ is intended for use with alcohol and xylene insoluble chromogens, such as DAB (for peroxidase systems) and Elegance Red (for alkaline phosphatase systems). XMount™ dries clear with an ideal refractive index similar to high quality glass and tissue elements. Mounted slides can be viewed with high magnification oil immersion lenses. Also, when mounting preparations stained with the BCIP/NBT substrate, crystal formation that may occur when using other media is minimized.

Mounting Medium

Product Name	15 mL(RTU)	50 mL(RTU)
Aqueous Mounting Medium - Manual	HK099-5K	NA
SuperMount Permanent Mounting Medium - Manual	HK079-5K	HK079-7K
Xmount Mounting Media (200 tests) – barcode	HX035-YCD	NA
Xmount Mounting Media (200 tests) – Xmatrx® Infinity	HX035-10X	NA

Negative Control Sera/Immunoglobulins

Each staining run should include a negative control slide to confirm reagent specificity. BioGenex, for this purpose, offers negative control sera/immunoglobulins which have been optimized for use as negative controls for our Super Sensitive™, Ready-to-Use antibodies. Negative controls are available for Mouse, Rabbit, Goat and Rat antibodies.

Negative Control Sera/Immunoglobulins

Product Name	3 mL	17 mL
Goat	HK406-5G	NA
Mouse	HK119-5M	HK119-7M
Rabbit	HK408-5R	HK408-7R
Rat	HK407-5T	NA

Reagent Vials & Accessories

1. i6000™ Elite & Xmatrx® Infinity

The OptiMiser reagent vials (U.S. & Foreign Equivalent Patents Pending) are available as a 20 mL disposable pack for use on the i6000™ or Xmatrx® Infinity staining systems. Vials are designed to minimize dead volume: <0.5 mL for 20 mL vials and 0.05 mL for 2 mL vials. Barcode labeled vials for use with antibodies from any supplier (user defined) are also available (XT026-601 to XT026-899 & XT026-601P to XT026-750P).

Cat. No.	Description	Figure
XT026-V24	Small White vials (20 mL) (24 per pack)	
XT101-24X	Brown vial without Neck/lid as holder for 2 mL insert (24 per pack)	
XT126-24V	Brown vial without Neck/lid as holder for 2 mL insert (24 per pack)	

Cat. No.	Description	Figure
XT149-V24	Vial Insert – 2 mL (24 per pack)	
XT027-H24	Vial holders (24 per pack)	
• 20 mL vials are provided with the vial holder ready to be placed in the reagent vial tray. • 2 mL vials need to be inserted in the vials without neck as shown here.		

2. Xmatrx® Elite

Reagents vials for Xmatrx® Elite Automated Staining Systems are barcode labeled 17 mL vials especially designed to ensure accurate identification, proper reagent inventory management and staining of up to 200 slides. These vial's dead volume is minimized to <0.5 mL. barcode labeled vials for use with antibodies from any supplier (user defined) are also available (XT077-AX601 to XT077-AX0999).

ISH probes are supplied in 2 mL vials, inserted in barcode labeled vial holders thus minimizing dead volume to <0.05 mL. barcode labeled vials for use with ISH probes from any supplier (user defined) are also available (XT079-PR0050 to XT079-PR0099).

Reagent Vials & Accessories for i6000™ Elite Dx

Product	1 unit
Slide Barcode Labels (Monoclonal Abs) -100/Sheet	AM6010-AM6990
Slide Barcode Labels (Polyclonal Abs) -100/Sheet	AR6010-AR6300
User defined Empty barcode-labeled Vials (20 mL)	XT026-601 to XT026-899
User defined Empty barcode-labeled Vials for user polyclonal antibodies (20mL)	XT026-601P to XT026-750P

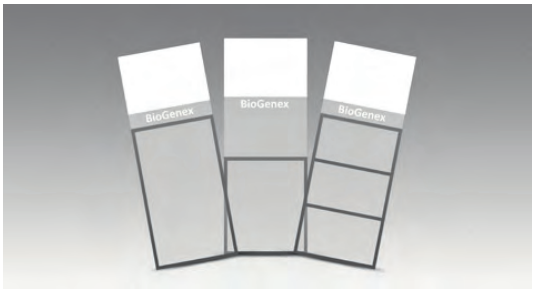
Reagent Vials & Accessories for Xmatrx® Elite/Ultra

Product	1 unit
Slide Barcode Labels (Monoclonal Abs) -100/Sheet	AM6010-AM6990
Slide Barcode Labels (Polyclonal Abs) -100/Sheet	AR6010-AR6300
User defined Empty barcode labeled vials- ISH Probes	XT079-PR0050 to XT079-PR0099
User defined Empty barcode labeled vials- One step IHC	XT077-AX0801 to XT077-AX0999
User defined Empty barcode labeled vials- Two step IHC	XT077-AX0601 to XT077-AX0800

Microscope Slides & Coverslips

OptiPlus™ Positive-Charged Microscope Slides provide a strong adhesive surface for tissues and cells to prevent tissue displacement during harsh pre-treatments such asenzymatic digestion and the microwave Antigen Retrieval method. These slides are ideal for automated systems. Additionally, each slide has a frosted end for easy labeling.The OptiPlus™ Positive-Charged Barrier Slides have all the advantages of our regular OptiPlus™ slides, but also contain hydrophobic barriers that allow the quantity of reagents per slide to be tailored to the size of the specimen. These slides eliminate reagent waste without the need to use a PAP pen, thereby reducing set-up time in manual assays as well as in automated systems. The permanent hydrophobic barriers are compatible with dewaxing solutions and other reagents. The slides are suitable for use with frozen tissue sections, formalin-fixed paraffin sections, and cytology preparations.

1. i6000™ Elite Automated Staining Systems



OptiPlus™ Barrier slides for i6000™ come in three different configurations to accommodate different tissue sizes or multiple tissues per slide:

1. A single, full-size test area of 25 x 40 mm
2. A single 2/3-size test area of 25 x 30 mm
3. Three 1/3-size test areas per slide, each measuring 25 x 15 mm

2. Xmatrx® Automated Staining Systems

OptiPlus™ Barrier Slides for Xmatrx® (U.S. & Foreign Equivalent Patents Pending) contain a double hydrophobic barriers that allows formation of an oil seal to prevent evaporation of microreagents during high temperature steps and prolonged incubations. Four different configurations are available:

1. A single test area of 25 x 40 mm (>80 µL of reagent recommended)
2. A single test area of 25 x 25 mm (>40 µL of reagent recommended)
3. A single test area of 18 x 18 mm (>10 µL of reagent recommended)
4. Two test area per slide, each measuring 18 x 18 mm

Coverslips are optimized for use on Xmatrx® staining systems and come is three configurations to accommodate the different barrier slides.

Microscope Barrier Slides & Coverslips for Xmatrx®

Product	1 Box	1 Case
Barrier Slides, 18 x 18 mm (70/box, 1400/case)	XT128-SL	XT128-CL
Barrier Slides, 18 x 18 mm, 2-Zone (72/box, 1440/case)	XT114-SL	XT114-CL
Barrier Slides, 25 x 25 mm (70/box, 1400/case)	XT108-SL	XT108-CL
Barrier Slides, 25 x 40 mm (70/box, 1400/case)	XT134-SL	XT134-CL
Coverslips, 18 x 18 mm (175/box, 1750/case)	XT121-YBX	XT121-XBK
Coverslips, 25 x 25 mm (90/box, 900/case)	XT122-90X	XT122-YQK
Coverslips, 25 x 40 mm (50/box, 500/case)	XT118-50X	XT118-YRK

Microscope Slides & Accesories for i6000™ and Manual

Product	1 Box	1 Case
Barrier Slide, 3 x 1/3 Test Areas	XT014-SL	XT014-CL
Barrier Slides, 2/3 Test Area	XT013-SL	XT013-CL
Microscopic Slides	XT002-SL	XT002-CL
PAP Pen (For 500 to 1000 Slides)-1 unit	XT001-PP	N/A

Pipette tips

BioGenex pipette tips are made of high-quality polypropylene and are RNase and heavy metals-free when untampered. Inner surface is extremely smooth and requires minimum wetting. 1 mL pipette tips are optimized for use on BioGenex Xmatrx® and i6000™ Staining Systems, while 200 µL tips are optimized for Xmatrx® staining systems.

Pipette tips for i6000™ & Xmatrx®

Product	1 Box	1 Case
Pipette Tips, 1 mL (192/box, 960/case)	XT105-01X	XT104-05X
Pipette Tips, 200 µL (960/box, 4800/case)	XT146-01X	XT145-05X

Consumables kits for Xmatrx®

Item	SKU	Size	Barrier Slides 25 x40 mm	Barrier Slides 25 x25 mm	Coverslips 25 x 40 mm	Coverslips 25 x 25 mm	1 mL Pipette Tips	200 µL Pipette Tips
IHC kit	XT148-YCDE	200 test	216	NA	1000	NA	384	960
ISH kit	XT144-YAD	100 test	NA	104	NA	900	384	960

Accessories

1. Antigen Retrieval Accessories Kits

The Antigen Retrieval Accessory Kit consists of slide holders and slide baths that make it convenient and compatible with any of the several Antigen Retrieval solutions. To accommodate microwave heating, the slide baths and slide holders are made of heat-stable thermoplastic polyolefin and hydrocarbon polymers of acetal resins. These accessories may be used in a microwave or a pressure cooker.

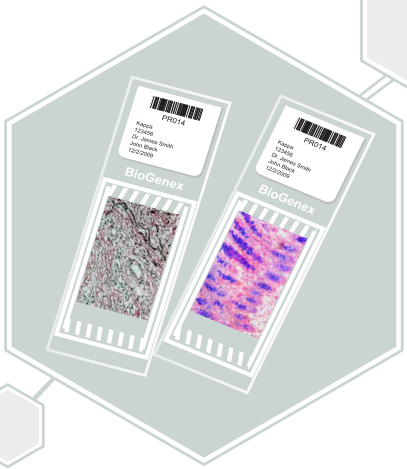
Item	SKU	Slide Bath + Lid	Slide Holder
24- Slide Accessory kit	MW001-SU	1	1 (24- slide capacity)
72- Slide Accessory kit	MW001-HB	3	3 (72- slide capacity)

2. NordicWare® Microwave Pressure Cooker

Placing the NordicWare®Microwave Pressure Cooker within a microwave is an effective method for enhancing staining with the Antigen Retrieval technique. The heat produced under enhanced pressure can reduce the build up of gas bubbles on the surface of tissues. This improves the intensity of staining, accompanied by preservation of tissue and cell morphology. This pressure cooker is also optimized for use with various BioGenex Antigen Retrieval solutions. BioGenex Catalog number: NW001-PC.

3. PAP pen for Tissue Staining

The PAP pen is a useful pen-like tool for immunohistochemical staining methods. It is designed to prevent the waste of valuable reagents by forming a water-repellent barrier around the specimen. This barrier creates the proper surface tension to hold an antibody solution or detection reagents within the target area on the slide. The surface tension provided by the PAP Pen circle ensures that only the amount of antibody solution needed for sufficient reaction will be applied. Since over-flooding of the slide is eliminated, wiping of excess fluid around the specimen can be avoided. The PAP pen can be used for immunostaining of paraffin sections, frozen sections, and for fluorescent antibody methods. The PAP pen contains a special formulation, which is water repellent. It can be removed, if desired, with xylene or xylene substitutes after the staining procedure is completed.



Tissue Control

Positive Control Slides and Barrier Slides

Positive control slides are made with tissue which has undergone processing identical to that of the test tissue. BioGenex provides positive control slides that enable one to confirm antibody reactivity.

Barrier slides are positive control tissue slides with barriers to prevent loss of reagent.

Pack Size: Positive Control slides (5 slides per pack)
Barrier slides (5 slides per pack)

Antibody	Clone	Recommended Positive Control	Control Slides Cat. No	Barrier Slides Cat. No
ABCC3	Polyclonal	COLON CA	FG-800P	FB-800P
Aberrant Endothelial Cell	4A11	TONSIL	FG-382M	FB-382M
ACTH	AH26	Pituitary	FG-487N	FB-487N
Actin; Muscle-Specific	HHF35	MUSCLE	FG-090M	FB-090M
Actin; Smooth Muscle	1A4	STOMACH	FG-128M	FB-128M
Adenovirus	A62020069P	BION SLIDE	FG-059ME	FB-059ME
ALK/p80	SP8	ADENO CA	FG-770N	FB-770N
Alpha-1-Antichymotrypsin	a1A88	LIVER CA	FG-388M	FB-388M
Alpha-1-Antitrypsin	Polyclonal	HEPATOCELLULAR CA	FG-015P	FB-015P
Alpha-Actinin	JLN20	MUSCLE	FG-097M	FB-097M
Alpha-Fetoprotein (AFP)	C3	HEPATOCELLULAR CA	FG-008M	FB-008M
Alpha-Tubulin	DM-1A	LUNG	FG-121M	FB-121M
Anaplastic Lymphoma Kinase (ALK)	SP144	ANAPLASTIC LYMPHOMA	FG-874N	FB-874N
Androgen Receptor	F39.4.1	PROSTATE HYPER	FG-256ME	FB-256ME
B Cell	MB2	TONSIL	FG-158M	FB-158M
B Lymphocyte Antigen 36; BLA-36	A27-42	HODGKIN	FG-231M	FB-231M
Basic Fibroblast Growth Factor (bFGF)	bFGF88	ADENO CA	FG-359M	FB-359M
Bax Protein	Polyclonal	BREAST CA	FG-347P	FB-347P
BCL-2	EP36	BREAST CA	FG-723N	FB-723N
bcl-2 Oncoprotein	bcl-2/100	TONSIL	FG-287M	FB-287M
Bcl-2α	SP66	TONSIL	FG-758N	FB-758N
BCL-6	LN22	TONSIL	FG-708M	FB-708M
Bcl-x	EP94	TONSIL	FG-819N	FB-819N
BCR-ABL	7C6	Ca. Liver	FG-903ME	FB-903ME
Beta-Catenin	EP35	BREAST	FG-778N	FB-778N
Beta-Tubulin	DM-1B	LUNG	FG-122M	FB-122M
Beta-Tubulin II	JDR3B8	COLON	FG-176M	FB-176M
Beta-Tubulin III	SDL3D10	HEART	FG-177M	FB-177M
Beta-Tubulin IV	ONS1A6	LUNG	FG-178M	FB-178M
Blood Group Antigen Lewis A	7LE	STOMACH	FG-303M	FB-303M
Blood Group Antigen Lewis B	2-25LE	STOMACH	FG-304M	FB-304M
BRCA1 Protein	Polyclonal	BREAST CA	FG-345P	FB-345P
Breast Cancer Antigen (BCA) 225	CU18	BREAST CA	FG-135M	FB-135M
CA 125	Ov185:1	OVARY CA	FG-429M	FB-429M
CA 19-9	C241:5:1:4	COLON	FG-424M	FB-424M
Caldesmon	EP19	UTERUS	FG-774N	FB-774N
Caldesmon HMW, Smooth muscle	h-CD	LEIOMYOMA	FG-332M	FB-332M
Calponin	CALP	BREAST CA	FG-333M	FB-333M
Calponin-1	EP63	PLEOMORPHIC ADENOMA	FG-821N	FB-821N

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Antibody	Clone	Recommended Positive Control	Control Slides Cat. No	Barrier Slides Cat. No
Calretinin	Polyclonal	CEREBRUM, CORTEX	FG-413P	FB-413P
Calretinin	2E7	Cerebellum	FG-583M	FB-583M
Calretinin	SP13	MESOTHELIOMA	FG-747N	FB-747N
Carcinoembryonic Antigen (CEA)	B01-94-11M-P	COLON CA	FG-009M	FB-009M
Carcinoembryonic Antigen (CEA)	Polyclonal	COLON CA	FG-009P	FB-009P
Carcinoembryonic Antigen (CEA)	CEA88	COLON CA	FG-365M	FB-365M
Catenin Delta 1 (P120)	Polyclonal	BREAST CA	FG-706P	FB-706P
Cathepsin D	C15	BREAST CA	FG-467M	FB-467M
CD10	56C6	KIDNEY	FG-451M	FB-451M
CD103	EP206	COLON CA	FG-739NE	FB-739NE
CD105	4G11	UTERUS	FG-441M	FB-441M
CD117	T595	STOMACH	FG-423M	FB-423M
CD117/c-Kit/SCF-Receptor	Polyclonal	GIST	FG-759P	FB-759P
CD11b/ITAM	M01	FROZEN TONSIL	FG-270M	FB-270M
CD11b/ITAM	EP45	SPLEEN	FG-851N	FB-851N
CD11c	EP157	TONSIL	FG-822N	FB-822N
CD13	EP117	LYMPHOMA	FG-832N	FB-832N
CD138	EP201	TONSIL	FG-837N	FB-837N
CD14	EP128	TONSIL	FG-814N	FB-814N
CD146	EP54	PLACENTA	FG-716N	FB-716N
CD15 (Blood group antigen Lewis X)	BRA4F1	HODGKIN	FG-302M	FB-302M
CD16	2H7	LYMPH NODE	FG-437M	FB-437M
CD16a	SP189	TONSIL/LUNG	FG-749N	FB-749N
CD16a	SP175	TONSIL	FG-762N	FB-762N
CD19	EP169	TONSIL	FG-729N	FB-729N
CD1a	010	LYMPH NODE	FG-490M	FB-490M
CD2	AB75	LYMPHOMA	FG-438M	FB-438M
CD20	CD20/C23	SPLEEN	FG-537M	FB-537M
CD20 (B cell)	L-26	TONSIL	FG-238M	FB-238M
CD205	EP176	TONSIL	FG-737NE	FB-737NE
CD21	B2	FROZEN TONSIL	FG-266M	FB-266M
CD21	SP186	TONSIL	FG-745NE	FB-745NE
CD21	EP64	TONSIL	FG-825N	FB-825N
CD22	FPC1	TONSIL	FG-439M	FB-439M
CD227 (MUCIN 1)	VU-4H5	MUCINOUS ADENO CA	FG-534M	FB-534M
CD23	Polyclonal	LYMPH NOSE	FG-460P	FB-460P
CD27	Polyclonal	Tonsil	FG-912PE	FB-912PE
CD29	JB1a	BREAST	FG-298M	FB-298M
CD3 (T cell)	UCHT1	FROZEN TONSIL	FG-258M	FB-258M
CD3 (T Cell)	PS1	TONSIL	FG-322M	FB-322M
CD3 (T Cell)	EP41	LYMPHOMA	FG-846N	FB-846N
CD30 (Ki-1 Antigen)	Ber-H2	HODGKIN	FG-327M	FB-327M
CD30 (Ki-1 Antigen)	HRS-4	HODGKIN	FG-351M	FB-351M
CD31 (Endothelial Cell)	JC/70A	COLON CA	FG-232M	FB-232M
CD31 (PECAM-1)	9G11	TONSIL	FG-241M	FB-241M
CD34 (Endothelial Cell)	QBend/10	COLON CA	FG-236M	FB-236M
CD34 (Endothelial Cell)	EP88	COLON CA	FG-779N	FB-779N

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CD35	RLB25	TONSIL	FG-431M	FB-431M
CD35	SP191	TONSIL	FG-741NE	FB-741NE
CD38	SP149	TONSIL	FG-769N	FB-769N
CD4	4B12	TONSIL	FG-421M	FB-421M
CD4	EP204	TONSIL	FG-722N	FB-722N
CD40	CL1673	Tonsil	FG-913ME	FB-913ME
CD41/Integrin	EP178	SPLEEN CA	FG-732NE	FB-732NE
CD43 & CD45RA Cocktail	MT1 & MB1	TONSIL	FG-159M	FB-159M
CD43 (T Cell, Leukosialin)	DFT-1	TONSIL	FG-305M	FB-305M
CD43 (T Cell, Leukosialin)	SP55	TONSIL	FG-748N	FB-748N
CD44 (Phagocytic Glycoprotein-1, HCAM)	DF1485	TONSIL	FG-310M	FB-310M
CD45 (Leukocyte common Antigen, LCA)	PD7/26/16 & 2B11	TONSIL	FG-111M	FB-111M
CD45 (Leukocyte common Antigen, LCA)	LJ27.9	TONSIL	FG-338M	FB-338M
CD45 Cocktail (Leukocyte Antigen, LCA)	MEM55+LJ27.9	TONSIL	FG-371M	FB-371M
CD45RA (B cell)	MB1	TONSIL	FG-157M	FB-157M
CD45RB	MEM55	TONSIL	FG-320M	FB-320M
CD45RC (T Cell)	MT2	TONSIL	FG-156M	FB-156M
CD45RO (T Cell)	UCHL-1	TONSIL	FG-113M	FB-113M
CD48	EP148	TONSIL	FG-721NE	FB-721NE
CD5	4C7	TONSIL	FG-430M	FB-430M
CD5	EP77	TONSIL	FG-824N	FB-824N
CD53	EP179	TONSIL	FG-734N	FB-734N
CD56 (Natural Killer Cell, NCAM)	NKH-1	FROZEN TONSIL	FG-268M	FB-268M
CD57 (Natural Killer Cell)	NK-1	TONSIL	FG-314M	FB-314M
CD63	EP211	PROSTATE/MELANOMA	FG-720NE	FB-720NE
CD66	BY114	TONSIL	FG-325M	FB-325M
CD68	KP1	LYMPH NODE	FG-416M	FB-416M
CD68	CD68/G2	HISTIOCYTOMA	FG-549M	FB-549M
CD7	LP15	Tonsil	FG-702M	FB-702M
CD7	SP94	TONSIL	FG-761N	FB-761N
CD71 (transferrin Receptor)	T9	FROZEN TONSIL	FG-269M	FB-269M
CD71 (transferrin Receptor)	H68.4	BONE MARROW	FG-354M	FB-354M
CD73	1D7	Tonsil	FG-904ME	FB-904ME
CD74 (B cell)	LN2	TONSIL	FG-153M	FB-153M
CD79a	11E 3	TONSIL	FG-414M	FB-414M
CD79a	EP82	LYMPH NODE	FG-719N	FB-719N
CD79a	SP18	TONSIL	FG-767N	FB-767N
CD8	T8	FROZEN TONSIL	FG-261M	FB-261M
CD8	1A5	Tonsil	FG-422M	FB-422M
CD8	SP16	TONSIL	FG-740N	FB-740N
CD82	EP160	ADENO CA	FG-757N	FB-757N
CD90	EP56	THYMUS	FG-733N	FB-733N
CD95	EP208	TONSIL	FG-742NE	FB-742NE
CD99	H036.1.1	EWINGS SARCOMA	FG-355M	FB-355M
CD99	EP8	EWING'S SARCOMA	FG-850N	FB-850N
CDK1	A17.1.1	Tonsil	FG-905ME	FB-905ME
CDK2	SP80	Tonsil	FG-906NE	FB-906NE

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CDK9	K.513.1	Ca. Cervix	FG-908NE	FB-908NE
CDw75 (B cell)	LN1	TONSIL	FG-152M	FB-152M
CDX-2	CDX2-88	COLON	FG-392M	FB-392M
CDX-2	EP25	COLON CA	FG-777N	FB-777N
CEACAM1	Polyclonal	Ca. Colon	FG-909PE	FB-909PE
c-erbB-2 (HER-2/neu)	SP101	BREAST CA	FG-752NE	FB-752NE
c-erbB-2 (HER-2/neu)	SP3	BREAST CA	FG-753NE	FB-753NE
c-erbB-2 (Her-2/neu)	CB11	BREAST CA	FG-134ME	FB-134ME
c-erbB-3 (HER-3)	RTJ1/A2	BREAST CA	FG-319M	FB-319M
Chromogranin A	LK2H10	PANCREAS	FG-126M	FB-126M
Chromogranin A	PHE-5	PANCREAS	FG-356M	FB-356M
CK7	OV-TL12/30	BREAST CA	FG-883M	FB-883M
c-Kit / CD117	EP10	STOMACH	FG-818NE	FB-818NE
Claudin-5	EP224	LUNG SQUAMOUS CA	FG-718N	FB-718N
c-myc Protein	9E10	ADENO CA	FG-318M	FB-318M
Coagulation Factor XIIIa	SP196	PLACENTA	FG-755N	FB-755N
Collagen III	HWD1.1	SKIN	FG-167M	FB-167M
Collagen IV	COL-94	SKIN	FG-379M	FB-379M
CSF-1R	SP211	Tonsil	FG-914NE	FB-914NE
Cyclin D1	Polyclonal	BREAST CA	FG-447P	FB-447P
Cyclin D1	EP12	BREAST CA	FG-815N	FB-815N
Cyclin E1	EP126	PLACENTA	FG-854N	FB-854N
Cytokeratin 10	DEK-10	SKIN	FG-201M	FB-201M
Cytokeratin 13	AE8	TONSIL	FG-132M	FB-132M
Cytokeratin 14	LL002	SQUAMOUS CELL CA	FG-146M	FB-146M
Cytokeratin 14	EP61	PROSTATE	FG-831N	FB-831N
Cytokeratin 15	EP14	SQUAMOUS	FG-855N	FB-855N
Cytokeratin 17	E27	SQUAMOUS CELL CA	FG-572M	FB-572M
Cytokeratin 18	DC-10	BREAST CA	FG-143M	FB-143M
Cytokeratin 19	RCK108	COLON CA	FG-246M	FB-246M
Cytokeratin 20	IT-Ks20.8	COLON CA	FG-315M	FB-315M
Cytokeratin 20	EP23	COLON CA	FG-849N	FB-849N
Cytokeratin 4	6B10	Tonsil	FG-705M	FB-705M
Cytokeratin 4	EP4	ESOPHAGUS	FG-717N	FB-717N
Cytokeratin 5	EP24	MESOTHELIOMA	FG-847N	FB-847N
Cytokeratin 5	EP42	CERVICAL CA	FG-853N	FB-853N
Cytokeratin 5 + Cytokeratin 14	EP24 + EP61	PROSTATE	FG-730NE	FB-730NE
Cytokeratin 6	EP67	CERVICAL	FG-845N	FB-845N
Cytokeratin 7	OV-TL12/30	BREAST CA	FG-255M	FB-255M
Cytokeratin 7 & 8	OV-TL12/30 & C51	BREAST CA	FG-587M	FB-587M
Cytokeratin 8	C51	BREAST CA	FG-142M	FB-142M
Cytokeratin 8 &18	5D3	COLON CA	FG-131M	FB-131M
Cytokeratin Cocktail	AE1 & AE3	SKIN	FG-071M	FB-071M
Cytokeratin cocktail, broad spectrum	34βE12/C51/AE1	SKIN, BREAST CA	FG-273M	FB-273M
Cytokeratin cocktail, broad spectrum	LL002+DEK-10+RCK108+OV-TL12/30+C11	BREAST CA	FG-372M	FB-372M

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Cytokeratin HMW (Basic)	AE3	SQUAMOUS CELL CA	FG-133M	FB-133M
Cytokeratin, High MW	34βE12	PROSTATE	FG-291M	FB-291M
Cytokeratin, Low MW	AE1	BREAST CA	FG-075M	FB-075M
Cytokeratin, Pan	Lu-5	COLON CA	FG-181M	FB-181M
Cytokeratin, Pan	C11	BREAST CA	FG-357M	FB-357M
Cytomegalovirus (CMV)	BM204	CMV INF. LUNG	FG-254ME	FB-254ME
Cytoteratin 5&6	EP24 & EP67	Cervical Cancer	FG-892N	FB-892N
Desmin	D33	LEIOMYMA	FG-072M	FB-072M
DOG1	1.1	Gist	FG-570M	FB-570M
Dystrophin	Dys1 (Dy4/6D3)	MUSCLE	FG-243M	FB-243M
Dystrophin	Dys2 (Dy8/6C5)	MUSCLE	FG-244M	FB-244M
E-Cadherin	36	COLON CA	FG-390M	FB-390M
E-Cadherin	EP6	BREAST CA	FG-725N	FB-725N
EGFR	Polyclonal	SQUAMOUS CA	FG-335PE	FB-335PE
EGFR	EP22	LUNG SQUAMOUS CA	FG-781NE	FB-781NE
Ep-CAM	EP155	ADENOMA	FG-820N	FB-820N
Epithelial Membrane Antigen (EMA)	E29	LUNG	FG-057M	FB-057M
Epithelial Membrane Antigen (EMA)	Mc5	BREAST CA	FG-182M	FB-182M
Epithelial-Specific Antigen	MOC-31	COLON CA	FG-316M	FB-316M
Epstein-Barr Virus (EBV) Early Antigen	1108-1	BION SLIDE	FG-222ME	FB-222ME
ERG, Ets-Related Gene	EP111	PROSTATE	FG-782N	FB-782N
Estradiol	Polyclonal	BREAST CA	FG-038P	FB-038P
Estrogen Recepto (ER) Beta	Polyclonal	BREAST CA	FG-385P	FB-385P
Estrogen Receptor (ER) Alpha	EP1	BREAST CA	FG-710NE	FB-710NE
Estrogen Receptor, ER (InSite®)	ER88	Breast Ca	FG-368M	FB-368M
Factor VIII-Related Antigen	F8 2.2.9	LEIOMYOMA	FG-016M	FB-016M
Factor XIIIa	E980.1	PLACENTA	FG-337M	FB-337M
Fascin	FCN01	LYMPH NODE	FG-488M	FB-488M
FLI1	Polyclonal	EWING'S SARCOMA	FG-798P	FB-798P
Follicle Stimulating Hormone (FSH)	Polyclonal	PITUITARY	FG-766P	FB-766P
Gastrin	Polyclonal	STOMACH	FG-019P	FB-019P
GCDFP-15	EP95	BREAST CA	FG-856N	FB-856N
GITR	Polyclonal	Tonsil/Spleen	FG-915PE	FB-915PE
Glial Fibrillary Acidic Protein (GFAP)	GA-5	CEREBELLUM	FG-020M	FB-020M
Glial Fibrillary Acidic Protein (GFAP)	Polyclonal	CEREBELLUM	FG-020P	FB-020P
Glial Fibrillary Acidic Protein (GFAP)	EP13	CEREBELLUM	FG-783N	FB-783N
Glomerular Epithelial Protein 1 (GLEPP-1)	5C11	KIDNEY	FG-336M	FB-336M
Glucagon	Polyclonal	PANCREAS	FG-039P	FB-039P
GLUT-1	SPM498	SQUAMOUS CA	FG-505M	FB-505M
Glutathione S-Transferase Pi (GST Pi)	Polyclonal	BREAST	FG-249P	FB-249P
Glycophorin A + B	E3	PLACENTA	FG-889M	FB-889M
Glypican-3 (GPC3)	GPC3-88	Hepatocellular Ca	FG-539M	FB-539M
Granulocyte	BM-2	Hodgkin	FG-210M	FB-210M
H.Pylori	ULC3R	STOMACH	FG-880ME	FB-880ME
Heat Shock Protein 27 (HSP 27)	G3.1	BREAST CA	FG-171M	FB-171M
Heat Shock Protein 70 (HSP 70)	BRM-22	BREAST CA	FG-289M	FB-289M
Hemoglobin A	Polyclonal	PLACENTA	FG-021P	FB-021P

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Hepatitis B Virus Core Antigen (HBcAg)	Polyclonal	HEPATITIS	FG-082PE	FB-082PE
Her2/ErbB2	EP3	Breast Ca	FG-726NE	FB-726NE
Herpes Simplex Virus Type I (HSV I)	Polyclonal	HSV INF. CULTURE	FG-084PE	FB-084PE
Herpes Simplex Virus Type II (HSV II)	Polyclonal	HSV INF. CULTURE	FG-085PE	FB-085PE
HLA-DR	LN3	TONSIL	FG-154M	FB-154M
HSA	HSA/E8	LIVER	FG-550M	FB-550M
Human Chorionic Gonadotropin (hCG) Beta	M94138	PLACENTA	FG-395M	FB-395M
human Growth Hormon (hGH)	Polyclonal	PLACENTA	FG-707P	FB-707P
IDO	4D2	Tonsil/Spleen	FG-916ME	FB-916ME
IgA	Polyclonal	TONSIL	FG-045P	FB-045P
IgD	Polyclonal	TONSIL	FG-440P	FB-440P
IgG	Polyclonal	TONSIL	FG-050P	FB-050P
IgG	IgG88	Tonsil	FG-367M	FB-367M
IgM	IgM88	TONSIL	FG-366M	FB-366M
IgM	Polyclonal	TONSIL	FG-427P	FB-427P
Inhibin-Alpha	R1	OVARY	FG-446M	FB-446M
Insulin	HB125	PANCREAS	FG-029M	FB-029M
Insulin	EP125	PANCREAS	FG-735N	FB-735N
J chain	JC88	TONSIL, LYMPH NODE	FG-374M	FB-374M
J chain	SP105	TONSIL	FG-756N	FB-756N
Kappa Light Chain	L1C1	TONSIL	FG-048M	FB-048M
Kappa Light Chain	K88	Tonsil	FG-369M	FB-369M
Ki-67	MIB-1	LYMPHOMA, LYMPH NODE, TONSIL	FG-297M	FB-297M
Ki-67	Ki88	Lymphoma, Lymph Node, Tonsil	FG-370M	FB-370M
Ki-67	K-2	TONSIL	FG-410M	FB-410M
Ki-67	EP5	Lymphoma, Lymph Node, Tonsil	FG-727N	FB-727N
Ki-67 + Lambda Light Chain	K-2 + Polyclonal	TONSIL	N/A	N/A
KRAS	Polyclonal	COLON CA	FG-751P	FB-751P
LAG3	Polyclonal	Tonsil	FG-917PE	FB-917PE
Lambda Light Chain	Polyclonal	TONSIL	FG-049P	FB-049P
Lambda light chain	EP172	Tonsil	FG-715N	FB-715N
Lambda Light Chain	SP147	TONSIL	FG-763N	FB-763N
Laminin	Polyclonal	BRONCHUS	FG-078P	FB-078P
Luteinizing Hormone (LH)	SP132	PITUITARY	FG-787N	FB-787N
Lysozyme	Polyclonal	LYMPH NODE	FG-024P	FB-024P
Macrophage	LN5	LIVER	FG-165M	FB-165M
Mast Cell Tryptase	AA1	SKIN	FG-419M	FB-419M
MCM2	SP85	CERVICAL CA	FG-773N	FB-773N
MCM2	EP40	TONSIL	FG-834N	FB-834N
Melan-A (MART-1)	A103	MELANOMA	FG-361M	FB-361M
Melanoma	HMB45	MELANOMA	FG-001M	FB-001M
Cytokeratin 5 + Cytokeratin 14	EP24 + EP61	PROSTATE	FG-730N	FB-730N
CD41/Integrin	EP178	SPLEEN CA	FG-732N	FB-732N
Mesothelin	5B2	OVARYADENOMA	FG-433M	FB-433M
MiTF	MiTF/A13	MELANOMA	FG-554M	FB-554M
Mitochondrial Antigen	113-1	LIVER	FG-213M	FB-213M
MLH1	ES05	COLON	FG-703M	FB-703M

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CD205	EP176	TONSIL	FG-737N	FB-737N
MSH2	SP46	COLON CA	FG-743N	FB-743N
CD103	EP206	COLON CA	FG-739N	FB-739N
MSH6	2D4B5	Colon Ca	FG-454M	FB-454M
CD35	SP191	TONSIL	FG-741N	FB-741N
CD95	EP208	TONSIL	FG-742N	FB-742N
Mucin 1 (MUC1)	EP85	BREAST	FG-813N	FB-813N
Mucin 2 (MUC2)	CCP58	COLON CA	FG-358M	FB-358M
CD21	SP186	TONSIL	FG-745N	FB-745N
Mum/IRF4	SP114	HODGKINS	FG-750N	FB-750N
Muscle Actins	Actin 88 Cocktail	MUSCLE	FG-381M	FB-381M
Myelin Basic Protein	MBP88	CEREBELLUM	FG-380M	FB-380M
Myeloid Specific Antigen	BM-1	LYMPH NODE	FG-164M	FB-164M
Myeloid Specific Antigen	BM-3	LYMPH NODE	FG-216M	FB-216M
Myeloperoxidase (MPO)	Polyclonal	SPLEEN	FG-496P	FB-496P
c-erbB-2 (HER-2/neu)	SP101	BREAST CA	FG-752N	FB-752N
c-erbB-2 (HER-2/neu)	SP3	BREAST CA	FG-753N	FB-753N
Myoglobin	MG-1	MUSCLE	FG-012M	FB-012M
Myoglobin	Polyclonal	MUSCLE	FG-012P	FB-012P
Myosin Heavy Chain, Smooth Muscle	SMMS.1	BREAST	FG-331M	FB-331M
Myosin, Skeletal Muscle	MY-32	MUSCLE	FG-109M	FB-109M
Napsin A	IP64	LUNG / ADENO CA	FG-701M	FB-701M
Neurofilament	NE-14	NERVE	FG-073M	FB-073M
Neuron Specific Enolase (NSE)	MIG-N3	NERVE	FG-055M	FB-055M
NGF Receptor	EP31	BRAIN	FG-738N	FB-738N
Oct-2	EP115	TONSIL	FG-830N	FB-830N
Oct-4	EP143	TESTIS	FG-724N	FB-724N
Osteonectin	OST1	OSTEOSARCOMA	FG-387M	FB-387M
p105 PANA	2B3	TONSIL	FG-317M	FB-317M
p120 (Catenin delta 1)	SP63	BREAST	FG-760N	FB-760N
p16 (INK4a)	G175-405	CERVICAL CARINOMA, SQUAMOUS CELL CARINOMA	FG-540M	FB-540M
p16 + Ki67	G175-405 + EPR3611	CERVICAL CA	FG-601C	FB-601C
p21/WAF1	4D10	MELAMONA	FG-434M	FB-434M
p27 (Kip1)	DCS72	BREAST	FG-396M	FB-396M
p27 (Kip1)	EP104	BREAST	FG-817N	FB-817N
p34 (cdc2 Cyclin Dependent Kinase)	POH-1	Tonsil	FG-301M	FB-301M
P504S (AMACR)	13H4	PROSTATE CA	FG-449NE	FB-449NE
P504S (AMACR)	RBT-AMACR	PROSTATE CA	FG-538N	FB-538N
EGFR	EP22	LUNG SQUAMOUS CA	FG-781N	FB-781N
p53 Protein	BP53-12-1	BREAST CA	FG-195M	FB-195M
p53 Protein	DO7	BREAST CA.	FG-239M	FB-239M
p53 Protein	1801	Breast Ca	FG-240M	FB-240M
P63	4A4	PROSTATE HYPER	FG-418M	FB-418M
PAP	A40010	PROSTATE CA	FG-532M	FB-532M
Papillomavirus Type 16 (HPV-16)	Cam Vir-1	HPV INF	FG-362ME	FB-362ME
Pax-5	ZP007	TONSIL	FG-457M	FB-457M

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Antibody	Clone	Recommended Positive Control	Control Slides Cat. No	Barrier Slides Cat. No
Paxillin	EP89	BREAST CA	FG-876N	FB-876N
PD-1	NAT105	Tonsil	FG-918M	FB-918M
PDCD4	EP102	COLON CA	FG-875N	FB-875N
PD-L1	29E.2A3	Tonsil	FG-919ME	FB-919ME
PGP9.5	3D9	BRAIN	FG-736M	FB-736M
c-Kit / CD117	EP10	STOMACH	FG-818N	FB-818N
Placental Alkaline Phosphatase (PLAP)	PL8-F6	PLACENTA	FG-228M	FB-228M
Placental Lactogen (hPL)	Polyclonal	PLACENTA	FG-040P	FB-040P
Platelet-Derived Growth Factor (PDGF)	PDGF88	SQUAMOUS CA	FG-376M	FB-376M
Platelet-Derived Growth Factor (PDGF)	Polyclonal	SQUAMOUS CA	FG-376P	FB-376P
PMS2	EP51	COLON CA	FG-844NE	FB-844NE
Progesterone Receptor	1A6	BREAST CA	FG-172ME	FB-172ME
Progesterone Receptor (PR)	EP2	BREAST CA	FG-711NE	FB-711NE
Progesterone Receptor, PR (InSite®)	PR88	Breast CA	FG-328M	FB-328M
Prolactin	ME.121	Pituitary	FG-031M	FB-031M
Proliferating Cell Nuclear Antigen (PCNA)	PC10	COLON CA	FG-252M	FB-252M
Prostate Specific Acid Phosphatase (PSAP)	B01-94-21M-NA	PROSTATE HYPER	FG-013ME	FB-013ME
Prostate Specific Antigen (PSA)	ErPr8	PROSTATE HYPER	FG-014ME	FB-014ME
pS2 Estrogen Inducible Protein	PS2.1	BREAST CA	FG-190M	FB-190M
PSMA	EP192	PROSTATE	FG-714N	FB-714N
PSMA	SP29	PROSTATE CA	FG-768N	FB-768N
PMS2	EP51	COLON CA	FG-844N	FB-844N
PU.1	EP18	LYMPHOMA	FG-843N	FB-843N
Renal Cell Carcinoma (RCC)	RCC-26	RENAL CELL CARCINOMA	FG-543M	FB-543M
Ribonucleoprotein (RNP)	58-15	SPLEEN	FG-230M	FB-230M
S100 Beta	EP32	MELANOMA	FG-713N	FB-713N
S-100 Protein	15E2E2	MELANOMA	FG-058M	FB-058M
S-100 Protein	Polyclonal	MELANOMA	FG-058P	FB-058P
S100P	EP186	MELANOMA	FG-712N	FB-712N
Sarcomeric Actin	ZMSA-5	MUSCLE	FG-511M	FB-511M
Secretin	Polyclonal	STOMACH	FG-067P	FB-067P
SLAMF7	Polyclonal	Tonsil	FG-920PE	FB-920PE
SOX2	Polyclonal	UTERUS CERVIX	FG-788P	FB-788P
SOX2	EP103	SQUAMOUS	FG-833N	FB-833N
Substance P	Polyclonal	HYPOTHALAMUS	FG-069P	FB-069P
Survivin	EP119	BLADDER	FG-826N	FB-826N
Synaptophysin	Snp88	PANCREAS	FG-363M	FB-363M
H.Pylori	ULC3R	STOMACH	FG-880M	FB-880M
Tau	TAU-2	CEREBELLUM	FG-412M	FB-412M
Tau	Tau-5	CEREBELLUM	FG-459M	FB-459M
TdT	EP266	Thymus	FG-881N	FB-881N
Thyroglobulin	2H11	FOLLICULAR ADENOMA	FG-032M	FB-032M
Thyroid Stimulating Hormone (TSH)	5404	Pituitary	FG-033M	FB-033M
PD-L1	29E.2A3	Tonsil	FG-919M	FB-919M
BCR-ABL	7C6	Ca. Liver	FG-903M	FB-903M
CD27	Polyclonal	Tonsil	FG-912P	FB-912P
CD40	CL1673	Tonsil	FG-913M	FB-913M

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Antibody	Clone	Recommended Positive Control	Control Slides Cat. No	Barrier Slides Cat. No
CD73	1D7	Tonsil	FG-904M	FB-904M
CDK1	A17.1.1	Tonsil	FG-905M	FB-905M
CDK2	SP80	Tonsil	FG-906N	FB-906N
CDK9	K.513.1	Ca. Cervix	FG-908N	FB-908N
CEACAM1	Polyclonal	Ca. Colon	FG-909P	FB-909P
CSF-1R	SP211	Tonsil	FG-914N	FB-914N
GITR	Polyclonal	Tonsil/Spleen	FG-915P	FB-915P
IDO	4D2	Tonsil/Spleen	FG-916M	FB-916M
LAG3	Polyclonal	Tonsil	FG-917P	FB-917P
SLAMF7	Polyclonal	Tonsil	FG-920P	FB-920P
VIP	Polyclonal	COLON	FG-530P	FB-530P
ZAP-70	ZAP70-C3	TONSIL	FG-544M	FB-544M
ZAP-70	EP52	TONSIL	FG-852N	FB-852N

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  E-mail at: customer.service@biogenex.com

4. Other Terms and Conditions

- BioGenex is committed to quality, innovation, service, and support. We believe that the high degree of quality control performed on all our products will help you with consistent and reproducible results.
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