## LABORATORY RESEARCH SERVICES

# Human Skeletal Muscle-Derived Cells & Media



Human muscle derived cells isolated and cultured using Cook MyoSite's process were stained with a Mouse Anti-Human Desmin antibody Clone D33 (Dako M0760) at 1:250. Secondary antibody was Sheep anti-mouse::FITC (Sigma F2883) at 1:250. Nuclei were stained with DAPI.

## Invest in high-quality primary cells and media to make your research more reliable, consistent, and efficient.

Cook MyoSite® offers single-donor primary human skeletal muscle-derived cells (skMDC) characterized by age, gender, race, and BMI with specially formulated media that is optimized to make cell culture growth, differentiation, and cryopreservation as reliable as possible in your lab. We offer healthy and diseased cells from a range of donors.

## When you purchase cells or media, you're purchasing our expertise, too.

At Cook MyoSite, our services are backed by nearly two decades of clinical experience in muscle-related research. skMDC and media are processed using only the highest quality materials, and our highly experienced Laboratory Research Services team provides expert customer service and technical support to ensure that the cells perform as expected.

## Potential services include:

- Muscle and other adherent (e.g.-MSC) cell production and cryopreservation
- GMP and non-GMP production facilities available
- Manufacturing Process development
- Procurement and processing of muscle cells from specific donor populations
- Custom media formulations
- QC analytical testing and assay development



## skMDC Primary Human Skeletal Muscle-Derived Cells

Our skMDC are myoblast-like, non-differentiated cells for Research Use Only (RUO). Each lot must pass an assortment of quality tests to be approved for shipment including the ability to differentiate unless the donor has been clinically diagnosed with a condition that might affect this ability.

1 vial contains 500,000 cells. Upon request, we may be able to provide additional donor-specific information as available, such as diabetes history, physical activity, and other such information.

Contact Cook MyoSite for a complete listing of available lots and pricing.

Catalog #	Description	Volume
SK-1111	skMDC Human Skeletal Muscle-Derived Cells - Standard Donors	1mL
SK-2222	skMDC Human Skeletal Muscle-Derived Cells - Rare & Neuromuscular Diseased Donors	1mL

## MyoTonic<sup>™</sup> Family of Culture Media

## Our MyoTonic<sup>™</sup> Family of Culture Media is optimized for use with our skMDC cell samples and provides your lab with a range of options for cell growth, differentiation, and custom applications.

#### **Basal Medium**

Catalog #	Description	Volume
MB-2222	MyoTonic™ Basal Medium	450mL
ML-6666	MyoTonic™ Insulin-Free Basal Medium**	450mL

#### Supplements

Use our Growth Supplements to expand experimentally relevant quantities while maintaining culture phenotype.

Catalog #	Description	Volume
MS-3333	MyoTonic™ Growth Supplement	50mL
MS-8888	MyoTonic™ Serum-Free Growth Supplement	3mL

#### Differentiation

Our Differentiation Media to achieve consistent and controlled differentiation.

Catalog #	Description	Volume
MD-5555	MyoTonic™ Differentiation Media	250mL
MD-9999	MyoTonic™ Serum-Free Differentiation Media	250mL

## CryoTonic<sup>™</sup> Cryostorage Medium

Preserve your cells with our CryoTonic Cryostorage Medium, carefully formulated for mamallian cells to maintain high viability post-thaw.

Catalog #	Description	Volume
CR-9999	CryoTonic™ Cryostorage Medium	50mL

\*\* This product is a non-stock item and will be manufactured upon request. Contact researchsales@cookmyosite.com for more details.









## **Publications**

Our skMDC cell samples and media have been featured in a number of publications around the world. We encourage you to look through these studies and see how our offerings have helped researchers in a variety of fields produce results worth publishing. Discounts are available for researchers who mention our products in their publications.

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Jankowski R. A comparison of commercially-available human skeletal muscle cells and media for research applications. Nature Methods/Application Notes 2011

Owens J, Moreira K, Bain G. Characterization of primary human skeletal muscle cells from multiple commercial sources. In Vitro Cellular & Developmental Biology - Animal 2013;49(9): 695-705

Lee TY, Meszaros LB, Tobita K, Kumar AR. 3D Constructs of Human Skeletal Muscle-Derived Cells as a Model of Bone Formation: Osteogenic Differentiation in Response to BMP2. Plastic and Reconstructive Surgery 2013;132: 147-48

Lach-Trifilieff E, Minetti GC, Sheppard K, Ibebunjo C, Feige JN, et al. An antibody blocking activin type II receptors induces strong skeletal muscle hypertrophy and protects from atrophy. Molecular and Cellular Biology 2013;34(4): 606-18

Ye X, Lu L, Kolewe ME, Park H, Larson BL, et al. A biodegradable microvessel scaffold as a framework to enable vascular support of engineered tissues. Biomaterials 2013;34(38): 10007-15 Tchao J, Kim JJ, Lin B, Salama G, Lo CW, et al. Engineered Human Muscle Tissue from Skeletal Muscle Derived Stem Cells and Induced Pluripotent Stem Cell Derived Cardiac Cells. International Journal of Tissue Engineering 2013;2013: 198762

Tchao J, Han L, Lin B, Yang L, Tobita K. Combined biophysical and soluble factor modulation induces cardiomyocyte differentiation from human muscle derived stem cells. Scientific Reports 2014;4(1): 6614

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Pessina P, Kharraz Y, Jardi M, Fukada S, Serrano AL, et al. Fibrogenic Cell Plasticity Blunts Tissue Regeneration and Aggravates Muscular Dystrophy. Stem Cell Reports 2015;4(6): 1046-60

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Das S, Morvan F, Jourde B, Meier V, Kahle P, et al. ATP citrate lyase improves mitochondrial function in skeletal muscle. Cell Metabolism. 2015;21(6): 868-76

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Brzeszczyńska J, Meyer A, Mcgregor R, et al. Alterations in the in vitro and in vivo regulation of muscle regeneration in healthy ageing and the influence of sarcopenia. Journal of Cachexia, Sarcopenia and Muscle. 2017;9(1):93-105

Laternser S, Keller H, Leupin O, Rausch M, Graf-Hausner U, Rimann M. A Novel Microplate 3D Bioprinting Platform for the Engineering of Muscle and Tendon Tissues. SLAS Technol. 2018;23(6):599-613. doi:10.1177/2472630318776594

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Liqing L, Sherry CM, Jascha P, et al. HDAC4 Controls Muscle Homeostasis through Deacetylation of Myosin Heavy Chain, PGC-1, and Hsc70. Cell Reports. 2019;29(3):749-763.e12. doi:10.1016/j.celrep.2019.09.023.



## **Product Use and Guidelines**

Cook MyoSite products are distributed for research use only. The use of these products is not approved for human or veterinary use. Do not use Cook MyoSite products with in vitro diagnostic assays.

Products contain human source material. Treat as potentially infectious. Handle at Biological Safety Level 2 to minimize exposure to potentially infectious agents. Each donor tissue, prior to cell isolation, is tested for the presence of HIV, Hepatitis B, Hepatitis C, CMV, EBV, and toxoplasma. Testing cannot offer complete assurance that tested viruses are absent.

Buyer has no rights to transfer products, components or materials made using these products or use these products for commercial purposes. The term "commercial purposes" includes, but is not limited to, any of the following: use of products or their components in manufacturing; use of the product or their data components to provide a service, information, or data; intentional reproduction of cell products or their components indefinitely via immortalization; intentional use of products or their data components to intentionally identify individuals associated with applicable research samples; or use of products or their components for therapeutic or diagnostic purposes or resale of products or their components.

## **Shipping Information**

Cook MyoSite ships products globally to areas including but not limited to Canada, Europe, the United Kingdom, China, Japan, South Korea, and Australia. We typically ship domestic orders within 5-7 business days and international orders within 7-14 days.

## Disclaimer

Pricing may vary based on material sourcing and availability. Although the information in this skMDC Inventory List is presented in good faith and believed to be correct at the time of distribution, Cook MyoSite makes no representations or warranties as to the completeness or accuracy of the information. Cook MyoSite has no liability for any errors or omissions and maintains no obligation to update this listing.

For more information please see our <u>Terms and Conditions of Sale and Delivery</u> or contact us.

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