

Materials List for:

Isolation, Culture, Characterization, and Differentiation of Human Muscle Progenitor Cells from the Skeletal Muscle Biopsy Procedure

Brandon J. Gheller^{*1}, Jamie Blum^{*1}, Sharon Soueid-Baumgarten², Erica Bender¹, Benjamin D. Cosgrove², Anna Thalacker-Mercer¹

¹Division of Nutritional Sciences, Cornell University

²Meinig School of Biomedical Engineering, Cornell University

*These authors contributed equally

Correspondence to: Anna Thalacker-Mercer at aet74@cornell.edu

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Materials

Name	Company	Catalog Number	Comments
0.25% Trypsin, 2.21 mM EDTA	Corning	25-053-CI	Trypsin used for removing adherent <i>hMPCs</i> from cell culture vessels
10 cm cell culture plate	VWR	664160	Plates used for culturing <i>hMPCs</i>
15 mL Falcon tube	Falcon	352196	15 mL conical tubes used throughout the <i>hMPC</i> isolation and culturing protocols
24 well cell culture plate	Grenier Bio-One	662 160	Plates used for culturing <i>hMPCs</i>
7-AAD Viability Staining Solution	eBioscience	00-6993-50	Viability stain for identifying living cells during FACS sorting
Alexa Fluor 488 anti-human CD29, Clone: TS2/16	BioLegend	303016	Conjugated antibody for FACS
Black 96-well cell culture plate	Grenier Bio-One	655079	96-well cell culture plate ideal for fluorescent imaging using the Celigo S
Celigo S	Nexcelcom Bioscience		Imaging cytometer used to track <i>hMPC</i> cultures
Cell Strainer	VWR	352350	Cell strainer to eliminate large pieces of debris during muscle biopsy processing
Collagen Type I (Rat Tail)	Corning	354236	Collagen for coating cell culture plates
Collagenase D	Roche	11 088 882 001	Used for degradation of collagen and other connective tissue in the skeletal muscle biopsy tissue
Dimethyl Sulfoxide	VWR	WN182	Used for cryopreservation of <i>hMPCs</i>
Dispase II	Sigma Life Sciences	D4693	A protease used for enzymatic digestion of skeletal muscle biopsy tissue
Dulbecco's Modified Eagle Medium Low Glucose powder	Gibco	31600-034	Low glucose DMEM for muscle biopsy processing
Dulbecco's Phosphate Buffered Saline	Gibco	21600-010	PBS for muscle biopsy processing
EDTA Disodium Salt Dihydrate	J.T. Baker	4040-01	Required for FACS buffer
Fetal Bovine Serum	VWR	89510-186	Fetal bovine serum used for <i>hMPC</i> growth media
Ham's F12	Gibco	21700-026	Base media for <i>hMPCs</i>

Heat Inactivated Equine Serum	Gibco	26-050-070	Horse serum used to make <i>hMPC</i> differentiation media
Hemocytometer	iNCyto	DHC-N0105	Used to count cells
Hibernate A	Gibco	A1247501	Media for preserving skeletal muscle biopsy tissue
Hoechst 33342, trihydrochloride, trihydrate	Life Technologies	H21492	DNA stain for identifying all cells using the Celigo S
Isopropanol	Fisher Scientific	A416P-4	Used for controlled rate freezing of <i>hMPCs</i>
Moxi buffer	Orflo	MXA006	Buffer for automated cell counter
Moxi Cassettes	Orflo	MXC002	Cassettes for automated cell counter
Moxi z Mini Automated Cell Counter	Orflo		Automated cell counter
Mr. Frosty Freezing Container	Thermo Fisher Scientific	5100-0001	Commercially available controlled rate cell freezing container
Normal Goat Serum (10%)	Thermo Fisher Scientific	50062Z	Goat serum used in FACS buffer
PE-Cy7 Mouse Anti-human CD56 , Clone: B159	BD Pharmingen	557747	Conjugated antibody for FACS
Penicillin/Streptomycin 100X Solution	Corning	30-002-CI	Antibiotics added to culture media
Propidium iodide	Thermo Fisher Scientific	P3566	DNA stain for identifying dead cells using the Celigo S
Recombinant Human basic fibroblast growth factor	Promega	G5071	Supplement in <i>hMPC</i> growth media to prevent spontaneous differentiation
Recovery Cell Culture Freezing Medium	Gibco	12648-010	Media used to cryopreserve muscle biopsy slurries
Sodium Bicarbonate	Fisher Scientific	S233-3	Added to Ham's F12
Sterile Round Bottom 5 mL tubes	VWR	60818-565	Tubes used for FACS
UltraComp eBeads	eBioscience	01-2222-42	Compensation beads for calibrating flow FACS settings