

Materials List for:

# Isolation and Culture of Human Mature Adipocytes Using Membrane Mature Adipocyte Aggregate Cultures (MAAC)

Ida Alexandersson<sup>1</sup>, Matthew J. Harms<sup>1</sup>, Jeremie Boucher<sup>1,2,3</sup>

<sup>1</sup>Bioscience Metabolism, Research and Early Development, Cardiovascular, Renal and Metabolism (CVRM), BioPharmaceuticals R&D, AstraZeneca

<sup>2</sup>The Lundberg Laboratory for Diabetes Research, University of Gothenburg

<sup>3</sup>Wallenberg Centre for Molecular and Translational Medicine, University of Gothenburg

Correspondence to: Jeremie Boucher at [jeremie.boucher@astrazeneca.com](mailto:jeremie.boucher@astrazeneca.com)

URL: <https://www.jove.com/video/60485>

DOI: [doi:10.3791/60485](https://doi.org/10.3791/60485)

## Materials

Name	Company	Catalog Number	Comments
Autoclaved scissors			
Autoclaved spoons			
Autoclaved tweezers			
Bovine Serum Albumin (BSA)	Sigma-Aldrich	A6003	
Buffer RLT	QIAGEN	79216	Lysis buffer
CaCl <sub>2</sub> *2H <sub>2</sub> O	Sigma-Aldrich	C7902	
Conical tubes, 50 mL			
D-(+)-Glucose	Sigma-Aldrich	G7528	
DMEM/F-12	Gibco	31331-028	
Fetal bovine serum (FBS)	Gibco	10270-106	
Filter flask 0.2 µm pore size, 75 mm	Thermo Scientific	156-4020	500 mL
Filter flask 0.2 µm pore size, 75 mm	Thermo Scientific	158-0020	1000 mL
HBSS+CaCl <sub>2</sub> +MgCl <sub>2</sub>	Gibco	14065-49	
HEPES buffer solution (1M)	Gibco	15630-056	
High-Capacity cDNA Reverse Transcription kit	Applied Biosystems	4368814	
Insulin (Actrapid Penfill)	Novo Nordisk A/S		
KCl	Merck	104936	
KH <sub>2</sub> PO <sub>4</sub>	Merck	104873	
Medium 199	Gibco	10012-011	
Mesh filter (250 µM)	Sintab AB	6111-025043	
MgSO <sub>4</sub> *7H <sub>2</sub> O	Sigma-Aldrich	M1880	
NaCl	Sigma-Aldrich	S7653	
Needles, 18 G, 1.20 mm x 40 mm	Sterican	613-2948	
Pencillin-Streptomycin (Penn/Strep)	Gibco	15140	
Petri dishes, 150 mm x 21 mm	Thermo Scientific	168381	
Power SYBR Green PCR master mix	Applied Biosystems	4367659	
Quantstudio 7 Flex Real-Time PCR machine	Applied Biosystems		
RNeasy Mini kits	QIAGEN	74106	

Separation funnel	VWR	527-0008	For large scale preparation
Separation funnel	VWR	527-0005	For small scale preparation
Shaking incubator (37 °C)			
Syringes, 5 mL	Omnifix	612-2892	100 st
Tissue culture incubator (37 °C, 5% CO <sub>2</sub> )			
Transwells, 24-well (6.5 mm)	Costar	3397	Permeable membrane inserts
TRIzol reagent	Invitrogen	10296010	Lysis buffer
Type 2 Collagenase	Worthington	LS004177	