

Materials List for

Preparation of Human Myocardial Tissue for Long-Term Cultivation

Jules Hamers^{1,2}, Payel Sen^{1,2}, Daphne Merkus^{1,2,3}, Thomas Seidel^{4,5}, Kun Lu^{1,6}, Andreas Dendorfer^{1,2}

¹Walter-Brendel-Centre of Experimental Medicine, University Hospital, LMU Munich ²German Center for Cardiovascular Research (DZHK), Partner Site Munich, Munich Heart Alliance (MHA) ³Division of Experimental Cardiology, Department of Cardiology, Erasmus MC, University Medical Center Rotterdam ⁴Institute of Cellular and Molecular Physiology, Friedrich-Alexander-Universität Erlangen-Nürnberg ⁵Muscle Research Center Erlangen (MURCE), Friedrich-Alexander-Universität Erlangen-Nürnberg ⁶Department of Cardiac Surgery, University Hospital, LMU Munich

Corresponding Author

Jules Hamers

jules.hamers@med.uni-muenchen.de

Citation

Hamers, J., Sen, P., Merkus, D., Seidel, T., Lu, K., Dendorfer, A. Preparation of Human Myocardial Tissue for Long-Term Cultivation. *J. Vis. Exp.* (184), e63964, doi:10.3791/63964 (2022).

Date Published

June 2, 2022

DOI

10.3791/63964

URL

jove.com/video/63964

Materials

Name	Company	Catalog Number	Comments
Chemicals			
Agarose Low melting point	Roth	6351.2	
Bay-K8644	Cayman Chemical	19988	
BDM (2,3-Butanedione monoxime)	Sigma	B0753-1kg	
CaCl ₂ *H ₂ O	Merck	2382.1	
Calciseptine	Alomone Labs	SPC-500	
Glucose*H ₂ O	AppliChem	A3730.0500	
H ₂ O	BBraun	3703452	
HEPES	AppliChem	A1069.0500	
Histoacryl	BBraun	1050052	
Isopropanol 100%	SAV LP GmbH	UN1219	
ITS-X-supplement	Gibco	5150056	
KCl	Merck	1.04933.0500	
Medium 199	Gibco	31150-022	
MgCl ₂ *6H ₂ O	AppliChem	A1036.0500	
NaCl	Sigma	S5886-1KG	
NaH ₂ PO ₄ *H ₂ O	Merck	1.06346.0500	
Nifedipine	Sigma	N7634-1G	
Penicillin / streptomycin x100	Sigma	P0781-100ML	
β-Mercaptoethanol	AppliChem	A1108.0100	
Laboratory equipment			
Flow cabinet	Thermo Scientific	KS15	
Frigomix waterpump and cooling + BBraun Thermomix BM	BBraun		In-house made combination of cooling and heating solution.
Incubator	Binder	CB240	

MyoDish culture system	InVitroSys GmbH	MyoDish 1	Myodish cultute system
Vibratome	Leica	VT1200s	
Water bath 37 degrees	Haake	SWB25	
Water bath 80 degrees	Daglef Patz KG	7070	
Materials			
100 mL plastic single-use beaker	Sarstedt	75.562.105	
Filtration unit, Steritop Quick Release	Millipore	S2GPT05RE	
Needles 0.9 x 70 mm 20G	BBraun	4665791	
Plastic triangles			In-house made
Razor Derby premium	Derby Tokai	B072HJCFK6	
Razor Gillette Silver Blue	Gillette	7393560010170	
Scalpel disposable	Feather	02.001.30.020	
Syringe 10 mL Luer tip BD Discardit	BBraun	309110	
Tissue Culture Dish 10 cm	Falcon	353003	
Tissue Culture Dish 3.5 cm	Falcon	353001	
Tubes 50 mL	Falcon	352070	