

Development of a Cell Co-Culture Model to Mimic Cardiac Ischemia/Reperfusion *In Vitro*

 Zhu Li¹, Matthew J. W. Hampton¹, Matthew B. Barajas¹, Matthias L. Riess^{1,2,3}
¹Department of Anesthesiology, Vanderbilt University Medical Center ²Anesthesiology, TVHS VA Medical Center ³Department of Pharmacology, Vanderbilt University

Corresponding Author

 Matthias L. Riess
 matthias.riess@vanderbilt.edu

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Materials

Name	Company	Catalog Number	Comments
Adult Mouse Cardiomyocytes (CMs)	Celprogen Inc	11041-14	Isolated from adult C57BL/6J mouse cardiac tissue
Automated Cell Counter Countess II	Invitrogen	A27977	Cell counting for calculating cell numbers
Bio-Safety Cabinet	Nuaire	NU425400	Cell culture sterile hood
Cell Culture Freezing Medium	Cell Biologics Inc	6916	Used for cell freezing for long term cell line storage
Cell Culture Incubator	Nuaire	Nu-5500	To provide normal cell living condition (21%O ₂ , 5%CO ₂ , 74%N ₂ , 37°C, humidified)
Cell Culture Incubator Gas Tank	A-L Compressed Gases	UN1013	Gas needed for cell culture incubator
Cell Culture Inserts A (0.5 mm)	Corning Inc	353095	Used for EC-CM co-culture
Cell Culture Inserts B (1.0 mm)	Millicell Millipore	PIHP01250	Used for EC-CM co-culture
Cell Culture Inserts C (2.0 mm)	Greiner Bio-One	662640	Used for EC-CM co-culture
Centrifuge	Anstel Enterprises Inc	4235	For cell culture plating and passaging
CMs Cell Culture Flasks T25	Celprogen Inc	E11041-14	Used for CMs regular culture, coated by manufacturer
CMs Cell Culture Medium Complete	Celprogen Inc	M11041-14S	CMs culture complete medium
CMs Cell Culture Medium Complete Phenol free	Celprogen Inc	M11041-14PN	CMs culture medium without phenol red used during LDH measurement
CMs Cell Culture Plates 96 well	Celprogen Inc	E11041-14-96well	Used for experiments of LDH measurement, coated by manufacturer
CMs Hypoxia Cell Culture Medium	Celprogen Inc	M11041-14GFPN	CMs cell culture under hypoxic condition (glucose- and serum-free)
Countess cell counting chamber slides	Invitrogen	C10283	Counting slides used for cell counter
Cyquant LDH Cytotoxicity Kit	Thermo Scientific	C20301	LDH measurement kit
ECs Cell Culture Flasks T25	Fisher Scientific	FB012935	Used for ECs regular culture
ECs Cell Culture Medium Complete	Cell Biologics Inc	M1168	ECs culture complete medium

ECs Cell Culture Medium Complete Phenol free	Cell Biologics Inc	M1168PF	ECs culture medium without phenol red used during LDH measurement
ECs Cell Culture Plates 96 well	Fisher Scientific (Costar)	3370	Used for experiments of LDH measurement
ECs Culture Gelatin-Based Coating Solution	Cell Biologics Inc	6950	Used for coating flasks and plates for ECs
ECs Hypoxia Cell Culture Medium	Cell Biologics Inc	GPF1168	ECs cell culture under hypoxic condition (glucose- and serum-free)
Fetal Bovine Serum (FBS)	Fisher Scientific	MT35011CV	FBS-HI USDA-approved for cell culture and maintenance
Hypoxia Chamber	StemCell Technologies	27310	To create a hypoxic condition with 0.01%O ₂ environment
Hypoxia Chamber Flow Meter	StemCell Technologies	27311	To connect with hypoxic gas tank for a consistent gas flow speed
Hypoxic Gas Tank (0.01%O ₂ Cylinder)	A-L Compressed Gases	UN1956	Used to flush hypoxic medium and chamber (0.01%O ₂ /5%CO ₂ /94.99N ₂)
Microscope	Nikon	TMS	To observe cell condition
Mouse Primary Coronary Artery Endothelial Cells (ECs)	Cell Biologics Inc	C57-6093	Isolated from coronary artery of C57BL/6 mice
NUNC 15ML CONICL Tubes	Fisher Scientific	12565269	For cell culture process, experiments, solution preparation etc.
NUNC 50ML CONICL Tubes	Fisher Scientific	12565271	For cell culture process, experiments, solution preparation etc.
Phosphate Buffered Saline (PBS)	Sigma-Aldrich	D8662	Used for cell washing during culture or experiments
Plate Reader	BioTek Instrument	11120533	Colorimetric or fluorometric plate reading
Reaction 96 Well Palte (clear no lid)	Fisher Scientific	12565226	Used for LDH measurement plate reading
Trypsin/EDTA for CMs	Celprogen Inc	T1509-014	1 x sterile filtered and tissue culture tested
Trypsin/EDTA for ECs	Cell Biologics Inc	6914/0619	0.25%, cell cuture-tested