

Materials List for:

Subtype-specific Optical Action Potential Recordings in Human Induced Pluripotent Stem Cell-derived Ventricular Cardiomyocytes

Alexander Goedel^{1,2}, Dorota M. Zawada^{*1}, Fangfang Zhang¹, Zhifen Chen³, Alessandra Moretti^{1,2}, Daniel Sinnecker^{1,2}

¹Medical Department I, University Hospital Klinikum rechts der Isar, Technical University of Munich

²German Centre for Cardiovascular Research (DZHK), Munich Heart Alliance

³Beth Israel Deaconess Medical Center, Harvard Medical School

*These authors contributed equally

Correspondence to: Daniel Sinnecker at sinnecker@tum.de

URL: <https://www.jove.com/video/58134>

DOI: [doi:10.3791/58134](https://doi.org/10.3791/58134)

Materials

Name	Company	Catalog Number	Comments
β-Mercaptoethanol	Invitrogen	21985023	
DMEM-F12 Medium	Invitrogen	21331046	
FBS (Fetal Bovine Serum)	Invitrogen	16141079	
MEM Non-Essential Amino Acids	Invitrogen	11140050	
GlutaMax-I Supplement	Invitrogen	35050061	alternative L-Glutamine
Penicillin-Streptomycin	Invitrogen	15140122	
Fibronectin bovine plasma	Sigma-Aldrich	F1141	
Collagenase type II	Worthington Biochem	LS004174	
Hexadimethrine Bromide (Polybrene)	Sigma-Aldrich	H9268	enhancing lentiviral infection
3.5 cm glass-bottom microdishes	MatTek corporation, Ashland, MA, USA	P35G-1.5-14-C	
Microscope stand	Leica Microsystems, Wetzlar, Germany	DMI6000B	
Microscope objective	Leica Microsystems, Wetzlar, Germany	HCX PL APO 63X/1.4-0.6 Oil	
sCMOS camera	Andor Technology, Belfast, UK	Zyla V	
Microscope filter cube: excitation filter	Chroma Technology Corp, Bellows Falls, VT, USA	ET480/40X	bandpass 480/40
Microscope filter cube: dichroic mirror	Chroma Technology Corp, Bellows Falls, VT, USA	T505lpxr	longpass 505 nm
Image splitter	Cairn Research, Faversham, UK	OptoSplit II	
Image splitter filter cube: dichroic mirror	AHF Analysentechnik GmbH, Tübingen, Germany	568LPXR	longpass 568 nm
Image splitter filter cube: emission filter 1 (GFP emission)	AHF Analysentechnik GmbH, Tübingen, Germany	520/28 BrightLine HC	bandpass 520/28 nm
Image splitter filter cube: emission filter 2 (RFP emission)	AHF Analysentechnik GmbH, Tübingen, Germany	630/75 ET Bandpass	bandpass 630/75 nm
Pacing inset	Warner Instruments, Hamden, CT, USA	RC-37FS	