

Materials List for

High-Throughput Optical Controlling and Recording Calcium Signal in iPSC-Derived Cardiomyocytes for Toxicity Testing and Phenotypic Drug Screening

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Citation

Chang, Y.F., Su, W.C., Su, C.C., Chung, M.W., Chang, J., Li, Y.Y., Kao, Y.J., Chen, W.P., Daniels, M.J. High-Throughput Optical Controlling and Recording Calcium Signal in iPSC-Derived Cardiomyocytes for Toxicity Testing and Phenotypic Drug Screening. *J. Vis. Exp.* (181), e63175, doi:10.3791/63175 (2022).

Date Published

March 31, 2022

DOI

10.3791/63175

URL

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Materials

Name	Company	Catalog Number	Comments
96-well plate	Perkin Elmer	6055302	
auto microfluidic system	Molecular Device		A device has a single channel pipetter that can be used to add compound automatically
Caffeine	Sigma-Aldrich	C0750	
Cardiosight-S I iPSC derived cardiomyocytes	NEXEL	C-002	
Dimethyl sulfoxide	Millipore Sigma	1096780100	
Dofetilide	Sigma-Aldrich	PZ0016	
E4031	Tocris	1808	
ER-LAR-GECO viral kit	LumiSTAR	AA001a	Red-shifted GECI packed into adeno-viral vector
Fibronectin	Sigma-Aldrich	F1141	
Fluo-4 AM	Invitrogen	F14201	Chemical calcium sensitive dye
Gelatin	Sigma-Aldrich	G1890	
ImageXpress Micro Confocal High-Content Imaging System	Molecular Device		
iPSC-CMs Maintenance Medium	NEXEL	CMS-002	iPSC-CMs Medium (Cardiosight-S medium) + Cardiosight-S Supplement
iPSC-CMs Medium (Cardiosight-S medium)	NEXEL	CMS-002	
K-GECO viral kit	LumiSTAR	AA005a	Red-shifted GECI packed into adeno-viral vector
LumiCAL software	LumiSTAR	LUCS01a	Software for analysis of calcium peak in cardiomyocytes

mNG-GECO viral kit	LumiSTAR	AL008a	Brighter green GECI packed into lenti-viral vector
mt-GCEPIA3 viral kit	LumiSTAR	AL011a	GECI targeting on mitochondria packed into lenti-viral vector
NIR-GECO viral kit	LumiSTAR	AV004a	Near infrared GECI packed into viral vector
Orai1-GGECO viral kit	LumiSTAR	AL010a	GECI targeting on Orai1 packed into lenti-viral vector
Tyrod's salts	Sigma-Aldrich	T2145	
Verapamil hydrochloride	Sigma-Aldrich	V4629	
Y-27632 dihydrochloride	Tocris	1254	