

Materials List for:

Direct-current Stimulation and Multi-electrode Array Recording of Seizure-like Activity in Mice Brain Slice Preparation

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Materials

Name	Company	Catalog Number	Comments
Anesthetic:			
Isoflurane	Halocarbon Products Corporation	NDC 12164-002-25	4%
Name			
Company			
Catalog Number			
Comments			
aCSF (total:1 L):			
D(+)-Glucose	MERCK	1.08337.1000	10 mM
Sodium hydrogen carbonate	MERCK	1.06329.0500	25 mM
Sodium chloride	MERCK	1.06404.1000	124 mM
(+)-Sodium L-ascorbate, >=98%	SIGMA	A4034-100G	0.15 g/2 c.c
Magnesium sulfate, anhydrous, ReagentPlus	SIGMA	M7506-500G	2 mM
Calcium chloride dihydrate	MERCK	1.02382.1000	2 mM
Sodium dihydrogen phosphate monohydrate	MERCK	1.06346.1000	1 mM
Potassium chloride	May & Baker LTD Dagenham England	MS 7616	4.4 mM
Name			
Company			
Catalog Number			
Comments			
Drugs:			
(+)-Bicuculline	TOCRIS	0130	5 µM in aCSF
4-Aminopyridine	TOCRIS	0940	250 µM in aCSF
Name			
Company			
Catalog Number			
Comments			
Brain slice Preparation:			
Vibratome	Vibratome	Series 1000	Block slicing into 500 µm thick slices
Name			
Company			
Catalog Number			
Comments			
MEA system:			
Multielectrode array (MEA) probes: 6 x 10 planar MEA	Multi Channel Systems	60MEA500/30iR-Ti-pr MEAS 6x10	electrode diameter, 30 µm; electrode spacing, 500 µm; impedance, 50 kΩ at 200 Hz
Multielectrode array (MEA) probes: 8 x 8 MEA	Ayanda Biosystems	60MEA200/10iR-Ti-pr MEAS 8x8	pyramidal-shaped electrode; diameter, 40 µm; tip height, 50 µm; electrode spacing, 200 µm; impedance, 1,000 kΩ at 200 Hz
A 60-channel amplifier was used with a band-pass filter set between 0.1 Hz and 3 KHz at 1,200X amplification	Multi-Channel Systems	MEA-1060-BC	

MC Rack software at a 10 KHz sampling rate	Multi-Channel Systems		Software for data collect and recordings
control of a pulse generator	Multi-Channel Systems	STG 1002	
slice anchor kits and hold-downs	Warner Instruments	SHD-26H/10; WI64-0250	
Peristaltic Pump-minipuls3	Gilsom	MINIPULS3	perfusion rate : 8 ml/min
Name	Company	Catalog Number	Comments
Stimulation system:			
Isolated stimulator	A-M Systems	Model 2100	intensity of $\pm 350 \mu\text{A}$, duration of 200 μsec
Tungsten electrode	A-M Systems	575300	placed in thalamus