

Materials List for:

Investigating Functional Regeneration in Organotypic Spinal Cord Co-cultures Grown on Multi-electrode Arrays

Martina Heidemann¹, Jürg Streit¹, Anne Tschertter¹

¹Department of Physiology, University of Bern

Correspondence to: Anne Tschertter at tscherter@pyl.unibe.ch

URL: <https://www.jove.com/video/53121>

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Materials

Name	Company	Catalog Number	Comments
Planar multielectrode array	Qwane Biosciences		custom-made according to the design of our lab
Nutrient medium			For 100 ml
Dulbeccos modified Eagle's medium	Gibco	31966-021	80 ml
Horse serum	Gibco	26050-070	10 ml
distilled, sterile water			10 ml
Nerve growth factor-7S [5 ng/ml]	Sigma-Aldrich	N0513	200 µl
reconstituted in wash solution with 1% BSA			
Coating solution			
Extracellular matrix gel	BD Biosciences	356230	Must stay cold at all times; dilute 1:50 with medium optimized for prenatal and embryonic neurons
medium optimized for prenatal and embryonic neurons	Gibco	21103-049	
Wash solution			[mg/L]
MgCl ₂ -6H ₂ O			100
MgSO ₄ -7H ₂ O			100
KCl			400
KH ₂ PO ₄			60
NaCl			8,000
Na ₂ HPO ₄ anhydrous			48
D-Glucose (Dextrose)			1,000
According to the protocol on http://www.lifetechnologies.com/ch/en/home/technical-resources/media-formulation.152.html			
Extracellular solution (pH 7.4)			[mM]
NaCl			145
KCl			4
MgCl ₂			1
CaCl ₂			2
HEPES			5
Na-pyruvate			2
Glucose			5
Blocking Solution			
Detergent: Triton X-100			0.3%, harmful if swallowed
Bovine serum albumin	Sigma-Aldrich	A9418	1%

Goat serum	Gibco	16210-064	5%
Chicken Plasma	Sigma-Aldrich	P2366	Lyophilized, reconstitute with wash solution
Gabazine	Sigma-Aldrich	SR-95531	
Mecamylamine hydrochloride	Tocris	2843	toxic if swallowed
Micropipette	World Precision Instruments, Inc.	MF28G-5	
Paraformaldehyde			harmful, 4%
SMI-31	Covance	SMI-31P	
SMI-32	Covance	SMI-32R-500	
Strychnine	Sigma-Aldrich	S0532	toxic
Thrombin	Merck Millipore	1123740001	irritant, sensitizing, reconstitute with wash solution
Tissue culture flat tube 10 (= roller tube)	Techno Plastic Products AG	91243	