

Materials List for

Long-term Mouse Spinal Cord Organotypic Slice Culture as a Platform for Validating Cell Transplantation in Spinal Cord Injury

Francesca Merighi¹, Sara De Vincentiis¹, Marco Onorati¹, Vittoria Raffa¹

¹Department of Biology, University of Pisa

Corresponding Author

Vittoria Raffa
vittoria.raffa@unipi.it

Citation

Merighi, F., De Vincentiis, S., Onorati, M., Raffa, V. Long-term Mouse Spinal Cord Organotypic Slice Culture as a Platform for Validating Cell Transplantation in Spinal Cord Injury. *J. Vis. Exp.* (206), e66704, doi:10.3791/66704 (2024).

Date Published

April 12, 2024

DOI

10.3791/66704

URL

jove.com/video/66704

Materials

Name	Company	Catalog Number	Comments
anti-cleaved Caspase-3, (Asp175) (5A1E) (Rabbit)	Cell Signaling Technology	9661S	1:400
anti-GFP (Mouse) - monoclonal	Sigma/Merck	G6539	1:400
anti-Human Nuclei (Mouse) - monoclonal, clone 235-1	Sigma/Merck	MAB1281	1:400
anti-Human Nuclei (Rabbit)	NeoBiotechnologies	RBM5-346-P1	1:400
anti-NeuN (RBFOX3) (Rabbit) - polyclonal	Sigma/Merck	ABN78	1:400
anti-NFL (Mouse)	Sigma/Merck	MAB1615	1:400
anti-NFL H-Phospho (Rabbit) - polyclonal	Biologend	840801	1:500
Aqua Polymount	Poly-sciences	18606-20	
B-27	Gibco	17504-044	
BDNF	Gibco	PHC7074	
Blades	Leica	118364227	
Cell culture graded water	Sigma/Merck	W3500-500ML	
Collagen from rat tail	Sigma/Merck	C7661	
Confocal microscope - A1 Confocal Microscope (Eclipse Ti)	Nikon		
D(+)-Glucose	Sigma/Merck	G7021	
Dissecting Forceps	World Precision Instruments	15915	
DMEM/F12	Gibco	31330	
DPBS	Sigma/Merck	D8537	
EGF	Sigma/Merck	gf144	
FBS	Gibco	10270-106	
FGF-2	Stemgent	03-0002	
GDNF	Sigma/Merck	SRP3200	

Glass capillaries, 3.5"	Drummond Scientific Company	3-000-203-G/X	
Glutamax	Gibco	35050-038	
Goat-anti Mouse IgG Alexa Fluor 488	Thermo Fisher Scientific	A11029	
Goat-anti Mouse IgG Alexa Fluor 647	Thermo Fisher Scientific	A21236	1:500
Goat-anti Rabbit IgG Alexa Fluor 568	Thermo Fisher Scientific	A11011	1:500
Goat-anti Rabbit IgG Alexa Fluor 647	Thermo Fisher Scientific	A21244	1:500
Graph Pad-Prism	Dotmatics		Software for Statistical Analysis
HBSS	Gibco	14025-050	1:500
HEPES	Gibco	15630-056	
Hoechst 33342	Thermo Fisher Scientific	H3570	
Horse Serum	Gibco	16050-122	
Insulin	Sigma/Merck	I9278	
Laminin	Sigma/Merck	L2020	
Lentiviral prep	Addgene	17446-LV	
L-Glutamine	Thermo Fisher Scientific	25030024	
LIVE/DEAD Viability/Cytotoxicity assay kit	Thermo Fisher Scientific	L32250	
Mcllwain Tissue Chopper	World Precision Instruments		
MEM	Gibco	11090-081	
Microloader tips	Eppendorf	5242956003	to load cells in the needle for transplantation
Microscope slides	VWR	631-0909	
Millicell cell culture membrane	Sigma/Merck	PICM0RG50	
Microscope cover glasses	VWR	ECN 631-1572	
N-2	Gibco	17502-048	
Neurobasal	Gibco	21103-049	
Penicillin/Streptomycin	Thermo Fisher Scientific	15140122	
Petri dish (35mm)	VWR	734-2317	
PFA	Sigma/Merck	P6148-500G	
Plastic pasteur pipette	Sarstedt	86.1171.010	
Pneumatic PicoPump	World Precision Instruments	PV830	Microinjector for transplantation
Poly-L-lysine	Sigma/Merck	P4707	
Scalpel blade No 10 Sterile Stainless Steel	VWR International	SWAN3001	
Scalpel handle #3	World Precision Instruments	500236	
Spring Scissors	World Precision Instruments	501235	
Stereomicroscope for imaging and acquisition	Nikon	SMZ18	
Stereomicroscope for surgery	VWR		
Triton X-100	Merck	T8787	
Tweezers-Dumont #5-inox	World Precision Instruments	501985	
Vannas Scissors, 8.5 cm	World Precision Instruments	500086	
Vertical micropipette puller	Shutter Instrument	P-30	
Y-27632	R&D Systems	1254/50	