

Materials List for:

# Modeling Astrocytoma Pathogenesis *In Vitro* and *In Vivo* Using Cortical Astrocytes or Neural Stem Cells from Conditional, Genetically Engineered Mice

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URL: <https://www.jove.com/video/51763>

DOI: [doi:10.3791/51763](https://doi.org/10.3791/51763)

## Materials

Name	Company	Catalog Number	Comments
Dulbecco's Modified Eagle Medium (DMEM) (1X)	Invitrogen	11995065	DMEM can also be purchased from other suppliers including GIBCOSigma and Cellgro
Fetal Bovine Serum, Regular	Cellgro	35-010-CV	
Penicillin-Streptomycin	Invitrogen	15140122	
Sharp-Pointed Dissecting Scissors	Fisher Scientific	08-395	
Cartilage Thumb Forceps, Curved	Fisher Scientific	1631	
Miltex 17-301 Style 1 Jeweler Style Forceps, Fine, 4	Miltex	17-301	
Ethanol (200 proof)	Decon Labs	2710	
Razor Blades	VWR	55411-050	
Hanks' Balanced Salt Solution (HBSS) (1x), liquid	Invitrogen	14175-095	
TrypLE Express (1x), Phenol Red	Invitrogen	12605-010	Other trypsin solutions are also suitable for cortical astrocyte harvest and culture
Culture Dish, 60 x 15 mm	Thomas Scientific	9380H77	
15 ml Tubes	BD Biosciences	352096	
50 ml Tubes	BD Biosciences	352070	
Adenovirus stock	Gene Transfer Vector Core, U. Iowa	Ad5CMVCre	Store in 5 µl aliquots at -80 °C. Hazardous. Use Bsl2 safety precautions
Sodium sulfate (Na <sub>2</sub> SO <sub>4</sub> )	Sigma-Aldrich	238597	
Potassium sulfate (K <sub>2</sub> SO <sub>4</sub> )	Sigma-Aldrich	221325	
Magnesium chloride (MgCl <sub>2</sub> )	Sigma-Aldrich	M8266	
Calcium chloride (CaCl <sub>2</sub> )	Sigma-Aldrich	746495	
HEPES potassium salt	Sigma-Aldrich	H0527	
D-(+)- Glucose	Sigma-Aldrich	G8270	
Phenol Red	Sigma-Aldrich	P3532	

Sodium hydroxide (NaOH)	Sigma-Aldrich	S5881	
Papain	Worthington	LS003127	
L-Cysteine-HCl	Sigma-Aldrich	C1276	
Syringe filter (0.22 µm pore size)	Millipore	SLGP033NS	
Neurocult proliferation kit, mouse	Stemcell Technologies	5702	This kit contains the NeuroCult NSC Basal Medium and NeuroCult NSC supplement needed for NSC culture
0.2% Heparin solution	Stemcell Technologies	7980	
EGF	Invitrogen	PMG8041	
bFGF	Invitrogen	PHG0261	
Hanks' Balanced Salt Solution (HBSS) (10x)	Invitrogen	14185-052	
Magnesium sulfate (MgSO <sub>4</sub> )	Sigma-Aldrich	M7506	
Sodium bicarbonate (NaHCO <sub>3</sub> )	Sigma-Aldrich	S5761	
E-64	Sigma-Aldrich	E3132	Make 10 mM stock in DMSO, store at -20 °C
6-well Plates	Fisher Scientific	07-200-83	
Cell strainer (40 µm pore size)	Corning	352340	
Stem cell dissociation solution	Stemcell Technologies	5707	Alternatively, use gentle enzyme solutions such as Accutase
Methyl cellulose 15 cP	Sigma-Aldrich	M7027	
Dulbecco's Modified Eagle's Media 2x	Millipore	SLM-202-B	For making 5% methyl cellulose solution
1.7 ml Snap Cap Microcentrifuge Tube	Corning	3620	
Hamilton syringe, 250 µl LT no needle	Fisher Scientific	14-815-92	
PB600-1 Antigen Dispenser	Hamilton	83700	
Disposable 18 G needles	Fisher Scientific	NC9015638	
27 ga 1/2" luer tip needle	Fisher Scientific	14-826-48	
2,2,2-Tribromoethanol (Avertin)	Sigma-Aldrich	T48402	
Betadine	Fisher Scientific	NC9386574	
Puralube Ophthalmic Ointment	Fisher Scientific	NC9689910	
Model 900 Stereotaxic frame	Kopf Instruments		
VETBOND	Fisher Scientific	NC9259532	Tissue adhesive
Lidocaine	ShopMedVet	RXLIDO-EPI	
CellTiter 96 AQueous One Solution Cell Proliferation Assay (MTS)	Promega	G3580	
Anti-Sox2	Millipore	AB5603	
Polyclonal Rabbit Anti-Glial Fibrillary Acidic Protein (GFAP)	Dako	Z0334	
IVIS Kinetic	PerkinElmer		For <i>in vivo</i> imaging
D-Luciferin - K+ Salt Bioluminescent Substrate	PerkinElmer	122796	For <i>in vivo</i> bioluminescence imaging
EdU Imaging Kit	Invitrogen	C10340	
MSCV Luciferase PGK-hygro	Addgene	18782	