

Materials List for

Using the Chick Embryo Brain as a Model for *In Vivo* and *Ex Vivo* Analyses of Human Glioblastoma Cell Behavior

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Materials

Name	Company	Catalog Number	Comments
1 cm x 1 cm square hole paper punch	Birabira	N/A	
1 mm biopsy punch pen	Robbins Instruments	20335	
6 well insert plate (Corning Transwell)	Millipore Sigma	CLS3450	
9" Disposable Pasteur Pipets	Fisher Scientific	13-678-20C	
15 mL centrifuge tubes	Fisher Scientific	05-539-12	
24 well plate	Corning Costar	3526	
50 mL centrifuge tubes	Fisher Scientific	05-539-9	
Agar	Fisher BioReagents	BP1423-500	for embedding fixed brains
Alexafluor 488-conjugated GAM IgG	Jackson ImmunoResearch	115-605-146	
Alexafluor 647-conjugated GAM IgG	Jackson ImmunoResearch	115-545-146	
Aluminum foil	ReynoldsWrap	N/A	
Ampicillin	Sigma Aldrich	A-9518	
anti-integrin alpha-6 monoclonal antibody GOH3	Santa Cruz Biotechnology	sc-19622	
anti-L1CAM monoclonal antibody UJ127	Santa Cruz Biotechnology	sc-53386	
anti-laminin monoclonal antibody	Developmental Studies Hybridoma Bank	3H11	
anti-nestin monoclonal antibody 10c2	Santa Cruz Biotechnology	sc-23927	
anti-Sox2 monoclonal antibody E-4	Santa Cruz Biotechnology	sc-365823	
B27 supplement without vitamin A	GIBCO	17504-044	
bisbenzimidazole (Hoechst 33258)	Sigma-Aldrich	B2883	nuclear stain
Cell culture incubator	Forma		standard humidified CO ₂ incubator
Centrifuge	Beckman Coulter		
Confocal microscope	Nikon Instruments	C2si+	With custom-made cell incubator chamber
Confocal microscope objective lenses	Nikon Instruments		Plan Apo lenses, except S Plan Fluor ELWD 20x 0.45 NA objective lens for confocal time-lapse imaging

Confocal microscope software	Nikon Instruments	NIS Elements	Version 5.2
Curved forceps	World Precision Instruments	504478	
Curved scissors	Fine Science Tools		
Curved spatula	Fisher Scientific	14-375-20	
Cyanoacrylate glue	Krazy Glue	KG-585 12R	
D-Glucose	Millipore Sigma	G8270	
DiD far red fluorescent dye	Invitrogen	V22887	Vybrant DiD
DMEM	Sigma Aldrich	D5671	
DMEM/F12	Sigma Aldrich	D8437	
DMSO	Sigma Aldrich	D4540	
Dulbecco's Phosphate buffered saline (PBS)	Sigma Aldrich	P5493-1L	
egg incubator	Humidaire		
electrical tape (10 mil thick/254 µm)	Scotch	N/A	
Ethanol 200 proof	Decon Laboratories	2701	
Fast green FCF dye	Avocado Research Chemicals	16520	
FBS	Gemini Bio-products	900-108	
filter paper	Fisher Scientific		
Gauze	Dynarex	3353	
Glass Capillaries for microinjection	World Precision Instruments	TW100-4	
Glycerol	Fisher BioReagents	BP228-1	for mounting media
GSCs (human glioblastoma stem cells)	Not applicable		Isolated from patient GBM specimens in Galileo laboratory in GSC media and then transduced with a GFP encoding lentiviral vector. Cells used were between passage 10 and 30.
Hanks Balanced Salt Solution (HBSS)	Corning	21-020-CV	
Hemocytometer	Hausser scientific		
Heparin	Fisher Scientific	BP2524-100	
HEPES buffer	Sigma Aldrich	H0887	
Horse Serum (HI)	Gibco	26050-088	
Human FGF-2	BioVision	4037-1000	
Human TGF-α	BioVision	4339-1000	
Inverted phase contrast microscope	Nikon Instruments	TMS	for routine viewing of cultured cells
KCl	Fisher Scientific	BP366	
KH ₂ PO ₄	Fisher Scientific	P284	
Laboratory film	Parafilm		
Labquake Shaker	LabIndustries	T400-110	
L-Glut:Pen:Strep	Gemini Bio-products	400-110	
Low-melt agarose	Fisher Scientific	BP1360	for embedding live brains
Matrix	Corning Matrigel	354234	
Medium 199	GIBCO	11150-059	
MEM	Corning	10-010-CV	
Metal vibratome block			

Micropipette tips (20, 200, 1,000 μ L)	Fisherbrand		
Micropipettors (20, 200, 1,000 μ L)	Gilson		
Microscope Coverglass (no. 1.5 thickness)	Fisherbrand	12544A	
NaCl	Fisher Scientific	S271	
NaH ₂ PO ₄ + H ₂ O	Fisher Scientific	S369	
NaHCO ₃	Fisher Scientific	BP328	
Normal goat serum	Millipore Sigma	526-M	
N-propyl gallate	Sigma Aldrich	P3130	for mounting media
Parafilm	Parafilm		
Paraformaldehyde	Electron Microscopy Sciences	15710	
PBS	Sigma Aldrich	P5493-1L	
Pencil			
Plain Microscope slides	Fisherbrand	12-550-A3	
Plastic 35 mm Petri dish	Becton Dickinson	351008	
pneumatic picopump	World Precision Instruments	PV830	
Poly(2-hydroxyethyl methacrylate) (poly-HEMA)	Sigma Aldrich	P-3932	
razor blade- double edge	PACE		for cutting fixed brain slices
sapphire knife	Delaware Diamond Knives		for cutting live brain slices
Scalpel	TruMed	1001	
Sodium cacodylate buffer 0.2 M pH 7.4	Electron Microscopy Sciences	11652	
Specimen chamber for vibratome	custom-made		
Stereo Dissecting Microscope	Nikon Instruments	SMZ1500	Equipped with epifluorescence
straight forceps	World Precision Instruments	500233	
straight scissors	Fine Science Tools		
Sucrose	Mallinckrodt	7723	
Time-lapse fluorescence microscope (widefield fluorescence)	Nikon Instruments	TE2000-E	With custom-made cell incubator chamber (see Fotos et al., 2006)
Tissue culture dish polystyrene 100 mm	Thermo Fisher Scientific	130182	for cell culturing
Tissue culture dish polystyrene 60 mm	Becton Dickinson	353004	for cell culturing
Transfer pipette	American Central Scientific Co.	FFP011	
Transparent tape	Scotch		
Triton X-100	Sigma Aldrich	T-8787	
Trypsin (0.25%) + 2.21 mM EDTA	Corning	25-053-CI	
U-118 MG human GBM cell line	ATCC	HTB-15	Cells were transduced with a lentiviral vector encoding the entire ectodomain sequence of the L1CAM adhesion protein and then with lentiviral vector pUltra-hot encoding mCherry. Passage numbers are unknown.
Vacuum pump	Cole-Parmer	EW-07532-40	"Air Cadet"
Vibrating tissue slicer	Vibratome	3000	for cutting live and fixed brain slices