

Materials List for:

# Hyaluronic-Acid Based Hydrogels for 3-Dimensional Culture of Patient-Derived Glioblastoma Cells

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## Materials

Name	Company	Catalog Number	Comments
pH meter	Thermo Fisher	N/A	Any pH meter that has pH 2-10 sensitivity
Stir plate	Thermo Fisher	N/A	General lab equipment
Erlenmeyer flask (125mL)	Thermo Fisher	FB-501-125	
dialysis tubes	Thermo Fisher	21-152-14	
2L polypropylene beaker	Thermo Fisher	S01916	
sodium hyaluronan	Lifecore	HA700k-5	500-750 kDa range
1-ethyl-3-(3-dimethylaminopropyl) carbodiimide (EDC)	Thermo Fisher	PI-22980	
N-hydroxysuccinimide (NHS)	sigma aldrich	130672-5G	
Hydrochloric acid (HCl)	Thermo Fisher	SA48-500	
Sodium hydroxide (NaOH)	Thermo Fisher	SS266-1	
Cystamine dihydrochloride	Thermo Fisher	AC111770250	
Dithiothreitol (DTT)	Thermo Fisher	BP172-25	
Ellman's test reagent (5-(3-Carboxy-4-nitrophenyl)disulfanyl-2-nitrobenzoic acid	Sigma Aldrich	D218200-1G	
Deuterated water (deuterium oxide)	Thermo Fisher	AC166301000	
0.22µm vacuum driven filter	CellTreat	229706	
Phosphate buffered saline (PBS)	Thermo Fisher	P32080-100T	
Hanks' balanced salt saline (HBSS)	Thermo Fisher	MT-21-022-CV	
4-arm-PEG-maleimide	JenKem Technology	A7029-1	molecular weight around 20kDa
4-arm-PEG-thiol	JenKem Technology	A7039-1	molecular weight around 20kDa
L-Cysteine	sigma aldrich	C7880-100G	
RGD ECM mimetic peptide	Genscript Biotech	N/A	Custom peptide with sequence "GCGYGRGDSFG", N-terminal should be acetylated
silicone molds	Sigma Aldrich	GBL664201-25EA	Use razor blade to cut into single pieces
complete culture medium	Various	Various	DMEM/F12 (Thermofisher) with non-serum supplement (G21 from GeminiBio), epidermal growth factor 50ng/mL (Peprotech), fibroblast growth factor 20ng/mL (Pepro Tech) and heparin 25µg/mL

			(Sigma Aldrich), culture medium varies in different labs
patient derived GBM cell	N/A	N/A	
20G needle	BD medical	305175	
1mL syringe	Thermo Fisher	14-823-434	
10mL syringe	BD medical	302995	
RIPA Buffer	Thermo Fisher	PI-89901	
protease/phosphatase inhibitor mini tablet	sigma aldrich	5892970001	
vortex shaker	Thermo Fisher	12-814-5Q	
TrypLE express	Thermo Fisher	12604013	
70µm cell strainer	Thermo Fisher	22-363-548	
Paraformaldehyde	Thermo Fisher	AC416785000	Dissolve 4% (w/v) in PBS, keep pH 7.4
D-sucrose	Thermo Fisher	BP220-1	
Optimal Cutting Temperature (O.C.T.) compound	Thermo Fisher	NC9373881	
Cell culture incubator	Thermo Fisher	N/A	Any General One with 5% CO2 and 37C
fridge/freezer	Thermo Fisher	N/A	Any General Lab equipment with -20C and -80C capacity
Disposable embedding molds	Thermo Fisher	12-20	
Lyapholizer	Labconco	N/A	Any -105C freeze dryers
HEPES	Thermo Fisher	BP310-500	
Amber vial	Kimble Chase	60912D-2	
Wide orifice pipette tips	Thermo Fisher	9405120	
2-methylbutane	Thermo Fisher	03551-4	
Dry Ice	N/A	N/A	