

Materials List for

# Graphene Enclosure of Chemically Fixed Mammalian Cells for Liquid-Phase Electron Microscopy

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## Materials

Name	Company	Catalog Number	Comments
Acetone for HPLC (min. 99.8 %)	Th. Geyer GmbH + Co. KG, Renningen, Germany	2626-1L	
AL54 analytical balance	Mettler-Toledo GmbH, Giessen, Germany	30029077	
Albumin Fraction V, biotin-free, ≥ 98 %, for molecular biology	Carl Roth GmbH + Co KG, Karlsruhe, Germany	0163.2	
Anti-HER2 Affibody Molecule, biotin conjugated 20 μM	Affibody, Solna, Sweden	10.0817.02.0001	
atomic resolution analytical microscope JEM-ARM200F	JEOL (Germany) GmbH, Freising, Germany		
Boric Acid	Sigma-Aldrich, Merck, Darmstadt, Germany	B6768-500G	
Cacodylic acid sodium salt trihydrate ≥ 98 %	Carl Roth GmbH + Co KG, Karlsruhe, Germany	5169.1	
Cell Culture Flasks, PS, treated, sterile, Filter screw cap 50ml	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	7696781	
Cell Culture Flasks, PS, treated, sterile, Filter screw cap 250ml	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	7696782	
Cell Culture Multiwell plates, treated, 24-well	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	7696792	
Cell Culture Multiwell plates, treated, 96-well	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	7696794	
CELLSTAR Cell Culture Flasks TC treated, 250 ml	Greiner Bio-One GmbH, Frickenhausen, Germany	658170	
CELLSTAR Cell Culture Multiwell Plates 96-well	Greiner Bio-One GmbH, Frickenhausen, Germany	655180	
CELLSTAR Centrifuge Tubes 15 ml sterile	Greiner Bio-One GmbH, Frickenhausen, Germany	188271	
CELLview cell culture dish, PS, 35/10mm, glass bottom, 1 compartment	Greiner Bio-One GmbH, Frickenhausen, Germany	627861	
Centrifuge 5418	Eppendorf, Wesseling-Berzdorf, Germany	5401000010	

Centrifuge Tubes 50 ml sterile	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	7696705	
Corning CellStripper non-enzymatic cell dissociation solution	Corning, NY, USA	25-056-CI	
D(+)-Saccharose min. 99,7 %, powdered	Th. Geyer GmbH + Co. KG, Renningen, Germany	9286.1	
Disposable Hemocytometer C-Chip Neubauer improved	Carl Roth GmbH + Co KG, Karlsruhe, Germany	PK36.1	
Easypet	Eppendorf, Wesseling-Berzdorf, Germany	443000018	
Eppendorf Research plus pipettes variable, 0.1 - 2.5 µl	Eppendorf, Wesseling-Berzdorf, Germany	312300012	
Eppendorf Research plus pipette variable, 2 - 20 µl	Eppendorf, Wesseling-Berzdorf, Germany	3123000039	
Eppendorf Research plus pipette variable, 10 - 100 µl	Eppendorf, Wesseling-Berzdorf, Germany	3123000047	
Eppendorf Research plus pipette variable, 100 - 1000 µl	Eppendorf, Wesseling-Berzdorf, Germany	3123000063	
Ethanol absolute for HPLC (min. 99.9 %)	Th. Geyer GmbH + Co. KG, Renningen, Germany	2222-1L	
Fibronectin-like engineered protein*poly mer-plus	Th. Geyer GmbH + Co. KG, Renningen, Germany	F8141	
Fluorescence Microscope Leica DMI6000	Leica Microsystems GmbH, Wetzlar, Germany		
Gibco Dulbecco's Modified Eagle Medium (DMEM), high glucose, GlutaMAX Supplement, pyruvate	FisherScientific, Hampton, NH, USA	31966021	
Gibco Fetal Calf Serum (FCS)	FisherScientific, Hampton, NH, USA	10099141	lot number: 1751893
Gibco Goat Serum, New Zealand origin	FisherScientific, Hampton, NH, USA	16210064	lot number: 1788320
Gibco Phosphate buffered saline (PBS), pH 7.4	ThermoFisher Scientific, Waltham, MA, USA	10010015	
Galaxy 48R CO <sup>2</sup> Incubator	New Brunswick, Eppendorf, Wesseling-Berzdorf, Germany	CO48310001	
Gatan Model 950 Solarus— Plasma Cleaner	Gatan GmbH, München, Germany		
Glutaraldehyde solution Grade I, 25% in H <sub>2</sub> O, specially purified for use as an electron microscopy fixative	Sigma-Aldrich, Merck, Darmstadt, Germany	G5882	
Glycine ≥ 98.5 % Ph.Eur., USP, BP	Carl Roth GmbH + Co KG, Karlsruhe, Germany	T873.1	
Inverted Laboratory Microscope Leica DM IL LED	Leica Microsystems GmbH, Wetzlar, Germany	DM IL LED	
Hot plate	Heidolph Instruments GmbH & CO. KG, Schwabach, Germany	MR 3002	
MEM non-essential Aminoacids (NEAAs) 100x W/O L-Glutamine	Biowest, Nuaille, France	X0557-100	
Microscope glass slides 76 mm x 26 mm	DWK Life Sciences GmbH, Wertheim/Main		
micro tubes (1.5 ml, 2 ml) non-sterile	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	1.5 ml: 7696751, 2 ml: 7696752	
MSc-Advantage— Class II Biological Safety Cabinet	ThermoFisher Scientific, Waltham, USA		
Ocean Microchips SiN window 400x150 µm, 200 nm spacer	DENSsolutions, Delft, The Netherlands		
Omnifix Single-use syringe Luer Lock Solo (10 ml, 20 ml, 50 ml)	B. Braun Melsungen AG, Melsungen, Germany	10 mL: C542.1 20 ml: T550.1	purchased via Carl Roth GmbH&Co. KG, Karlsruhe

Oven	Memmert GmbH + Co. KG, Schwabach, Germany	VO 200	
Parafilm	VWR, Darmstadt, Germany	#291-0057	
Paraformaldehyde 16 % solution, EM grade	Electron Microscopy Sciences, Hatfield, PA, USA	15710	
Perfekt-Kescher with handle	Plano GmbH, Wetzlar, Germany	T5112	
Pipette tips with aerosol barrier in racks, non-sterile	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	2-200µl: 7695892	
Pipette tips with aerosol barrier in racks, sterile	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	0.1-10 µl: 7695880 2-100 µl: 7695883 100-1000 µl: 7695886 1250 µl XL: 7695887	
Poly-L-Lysine 0.01 % solution mol.WT.70.000 - 150.000	Th. Geyer GmbH + Co. KG, Renningen, Germany	P4707	
Qdot 655 Streptavidin Conjugate 1 µM	Invitrogen, ThermoFisher Scientific, Waltham, MA, USA	Q10121MP	
Razor blade, Gem Uncoated 3 Facet, Steel Back, Degreased	Personna, AccuTec Blades, Verona, VA, USA	94-0451	
round filter paper, ashless, Grade 589/3 blue ribbon, diam. 150mm	Schleicher & Schuell, Dassel, Germany	300212	
Routine stereo Microscope Leica M60	Leica Microsystems GmbH, Wetzlar, Germany	M60	
Serological ROTILABO pipettes, sterile (1 ml, 2 ml, 10 ml)	Th. Geyer GmbH + Co. KG, Renningen, Germany	1 ml: N231.1 2 ml: N236.1 10 ml: ET30.1	
Serological pipettes, sterile, (1 ml, 2 ml, 10ml)	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	1ml: 7695550 2ml: 7695551 10ml: 7695553	
Serological pipettes, sterile, (5 ml, 25 ml, 50 ml)	Labsolute, Th. Geyer GmbH + Co. KG, Renningen, Germany	5 mL: 7695552 25ml: 7695554 50ml: 7695555	
Shaking water bath SW22	Julabo GmbH, Seelbach, Germany	9550322	
Sodium chloride	Carl Roth GmbH + Co KG, Karlsruhe, Germany	HN00.1	
Sodium chloride crystals, cleaved 12 mm x 12 mm x 0.5-1 mm	International Crystal Laboratories, Garfield, NJ, USA	9750	
Sodium tetraborate decahydrate, ACS reagent, ≥ 99.5 %	Sigma-Aldrich, Merck, Darmstadt, Germany	S9640-500G	
Sodium persulfate	Carl Roth GmbH + Co KG, Karlsruhe, Germany	4365.2	
syringe filters ROTILABO PES, sterile 0.22 µm	Carl Roth GmbH + Co KG, Karlsruhe, Germany	P668.1	
Trivial Transfer Graphene 3-5layers, 1 cm x 1 cm	ACS material, Pasadena, CA, USA	TTG30011	
Tweezers Dumoxel 03	Manufactures D'Outils Dumont SA, Montignez, Switzerland	0103-7-PO	
Tweezers Inox 02	Manufactures D'Outils Dumont SA, Montignez, Switzerland	0102-7-PO	
Tweezers, plastic replaceable tip	Ideal-tek SA, Balerna, Switzerland	5SVR.SA	
Water ROTISOLV HPLC gradient grade	Carl Roth GmbH + Co KG, Karlsruhe, Germany	A511.2	