

Materials List for:

A Guided Materials Screening Approach for Developing Quantitative Sol-gel Derived Protein Microarrays

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Materials

Name	Company	Catalog Number	Comments
			Reagent/Material
Poly(vinyl alcohol) (PVA)	Sigma-Aldrich	360627	80% hydrolyzed, M _w 600
Polyethylene glycol 600 (PEG)	Sigma-Aldrich	87333	
Polyethylenimine (PEI)	Sigma-Aldrich	482595	50 wt% solution in water
Carboxyethylsilanetriol (Si-COOH)	Gelest, Inc.	SIC2263.0	25% in water
N-(3-triethoxysilylpropyl) gluconamide (GLS)	Gelest, Inc.	SIT8189.0	50% in ethanol
bis[(3-methyldimethoxysilyl)propyl]polypropylene oxide (MDSPPPO)	Gelest, Inc.	SIB1660.0	
Methyltrimethoxysilane (MTMS)	Gelest, Inc.	SIM6560.1	
Bis(triethoxysilyl)ethane (Bis-TEOS)	Gelest, Inc.	SIB1817.0	
3-Aminopropyltriethoxysilane (APTES)	Gelest, Inc.	SIA0610.0	
Glycerol	Sigma-Aldrich	49767	
D-Sorbitol	Sigma-Aldrich	240850	
D-(+)-Trehalose dihydrate	Sigma-Aldrich	T9531	
Triton X-100	Sigma-Aldrich	X-100	
N ϵ -Acetyl-L-lysine	Sigma-Aldrich	A4021	
Tris(hydroxymethyl)aminomethane	Sigma-Aldrich	154563	
HEPES	Sigma-Aldrich	H3375	
Sodium hydroxide, 1.0 N	LabChem Inc.	LC24350-2	
Hydrochloric Acid, 1.0 N/0.1 N	LabChem Inc.	LC15300-2/LC152220-2	
Magnesium chloride	Sigma-Aldrich	M8266	
Diglycerolsilane (DGS)			Prepared in laboratory
Sodium silicate solution	Fisher Scientific	SS338-1	
Dowex 50WX8-100 ion exchange resin	Sigma-Aldrich	217492	
Acetylthiocholine iodide	Sigma-Aldrich	1480	
Acetylcholinesterase from <i>Electrophorus electricus</i> (electric eel)	Sigma-Aldrich	C2888	
BODIPY FL L-Cystine	Invitrogen	B-20340	
Pro-Q Diamond Phosphoprotein/ Phosphopeptide Microarray Stain Kit	Invitrogen	P33706	

Adenosine 5'triphosphate disodium salt (ATP) solution	Sigma-Aldrich	A6559	
MAP Kinase 2 (MAPK2)	EMD Millipore	454850	
p38 α /SAPK2 α (T106M), active	EMD Millipore	14-687M	
Epidermal growth factor (EGFR)	EMD Millipore		Donated by Millipore
Glycogen synthase kinase 3 β (GSK-3 β)	EMD Millipore	14-306	
Myelin basic protein (MBP)	EMD Millipore		Substrate for MAPK2 and p38 α , Donated by Millipore
GSM	EMD Millipore	12-533	Substrate for GSK-3 β
Poly-glu-tyr polypeptide p(E4Y)	EMD Millipore	12-440	Substrate for EGFR
Stealth pin	Arraylt	SMP3	
Stealth pin	Arraylt	SMP7	
Amine coated slides	Arraylt	SMM2	
Aldehyde coated slides	Arraylt	SMA2	
Exposy coated slides	Arraylt	SME2	
Poly(methylmethacrylate) (PMMA) coated slides	Exakt Technologies Inc.	41500	
0.2- μ m syringe filter	PALL Life Sciences	4612	
			Equipment
Virtek Contact Printer	BioRad		
Novaray Fluorescence Slide Imager	Alpha Innotech Corporation		
Desktop microarray centrifuge	Arraylt	MHC110V	
MilliQ Synthesis A10	Millipore		Used to filter all water required for experiments