

Molecular Spring Constant Analysis by Biomembrane Force Probe Spectroscopy

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Materials

Name	Company	Catalog Number	Comments
3-Mercaptopropyltrimethoxysilane (MPTMS)	Uct, Specialties, llc	4420-74-0	Glass bead functionalization
Anhy. Sodium Phosphate Dibasic (Na ₂ HPO ₄)	Sigma-Aldrich	S7907	Phosphate buffer preparation
BFP data acquisition VI	LabVIEW		BFP control and parameter setting
BFP data analysis VI	LabVIEW		BFP raw data analysis
Biotin-PEG3500-NHS	JenKem	A5026-1	RBC biotinylation
Borosilicate Glass beads	Distrilab Particle Technology, Netherlands	9002	Glass bead functionalization
Bovine serum albumin	Sigma-Aldrich	A0336	Ligand functionalization
Camera VI	LabVIEW		BFP monitoring
D-glucose	Sigma-Aldrich	G7021	Tyrode's buffer preparation
Hepes	Sigma-Aldrich	H3375	Tyrode's buffer preparation
MAL-PEG3500-NHS	JenKem	A5002-1	Glass bead functionalization
Potassium Chloride (KCl)	Sigma-Aldrich	P9541	Tyrode's buffer preparation
Sodium Bicarbonate (NaHCO ₃)	Sigma-Aldrich	S5761	Carbonate/bicarbonate buffer preparation; Tyrode's buffer preparation
Sodium Carbonate (Na ₂ CO ₃)	Sigma-Aldrich	S2127	Carbonate/bicarbonate buffer preparation
Sodium Chloride (NaCl)	Sigma-Aldrich	S7653	Tyrode's buffer preparation
Sodium Phosphate Monobasic Monohydrate (NaH ₂ PO ₄ •H ₂ O)	Sigma-Aldrich	S9638	Phosphate buffer preparation
Streptavidin-Maleimide	Sigma-Aldrich	S9415	Glass bead functionalization