

Materials List for:

Production and Targeting of Monovalent Quantum Dots

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Materials

Name	Company	Catalog Number	Comments
mQD Production			
Phosphorothioate DNA:			
(A*)x50-(ACTG)x5	IDT		Most DNA Synthesis companies
Quantum Dots:			
QDots 525, 585, 605 & 625	Invitrogen	Q21791MP (545), Q21711MP (585), Q21701MP (605)	Custom QD synthesis for QD625.
QD610	Ocean Nanotech	QSP-610-10	
QD 610 lamda	Aldrich	731854	
Chloroform, 99.8%	ACROS	67-66-3	
Tetrabutylammonium bromide, 98.0%	Sigma-Aldrich	426288	
mPEG thiol [2,5,8,11,14,17,20-Heptaadocosane-22-thiol], MW 354.5, 95%	Polypure	11156-0695	
HSC ₁₁ EG ₆ CO ₂ H [HS-(CH ₂) ₁₁ -(OCH ₂ CH ₂) ₆ -OCH ₂ CO ₂ H]	ProChimia	TH 003-m11.n6-0.1	
Boric Acid, 99.5%	Sigma-Aldrich	B0394	
Sodium Hydroxide, 99.0%	ACROS	S/4845	
Sodium Chloride, 98%	Sigma-Aldrich	310166	
Agarose LE	U.S. Biotech Sources	G02PD-125	
Ethanol	Sigma-Aldrich	459828	
BG-DNA Production			
Amine DNA:			
(CAGT) ₅ -NH ₂	IDT	N/A	Most DNA Synthesis companies
(CAGT) ₅ (T) ₄₀ -NH ₂	IDT	N/A	Most DNA Synthesis companies
NHS-GLA-Benzylguanine	New England Biosciences	S9151	
DMSO	Sigma-Aldrich	D8428	
HEPES Buffer	Sigma-Aldrich	83264	
NAP5 Column	GE Healthcare	17-0853-01	
C18 Column			
Acetonitrile			

Mammalian Cell Culture & Imaging			
Cell line expressing SNAP-tagged protein	New England Biosciences	E9100S	
McCoys 5A	UCSF Cell Culture Facility		Specific to U2OS culture
Fetal Bovine Serum	UCSF Cell Culture Facility		Specific to U2OS culture
PBS	UCSF Cell Culture Facility		
Nunc Lab-tek II Chambered Coverglass	Thermo-Fischer Scientific	155409	
Matriplate 96-well plate	Brooks Life Science Systems	MGB096-1-2-LG-L	
BSA			
5% Alkali-soluble Casein	EMD Millipore	70955	Not all caseins are the same
(Optional) DNA Synthesis Reagents			
5' Amine modifier C6	Glen Research	Oct-06	
dA-Thiophosphoramidite	Glen Research	10-700	
Analysis Software			
FIJI	http://valelab.ucsf.edu/~schindelin/		
RyTrack.pro	http://sun.iwu.edu/~gspaldin/rytrack.html		
Tracker	http://www.gartnerlab.ucsf.edu/more/software		