

Materials List for:

Synthesis of Immunotargeted Magneto-plasmonic Nanoclusters

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Materials

Name	Company	Catalog Number	Comments
PYREX 50 ml round bottom boiling flask with short neck & 24/40 [ST] joint	Corning	4320A-50	Thermal decomposition reaction
PYREX 41 x 300 mm 5-bulb Allihn condenser with 24/40 [ST] outer/inner joints	Corning	2480-300	Thermal decomposition reaction
Silicone oil	Fisher	S159-500	Oil bath
Hot plate stirrer	Corning	PC-351	Heat the reacton with stirring function
Thermometer	ThermoWorks	221-092	Measure temperature
Iron(III) acetylacetonate	Fisher	AC11913-0250	Material for primary hybrid nanoparticles synthesis
Oleic acid 99%	Fisher	A195-500	Material for primary hybrid nanoparticles synthesis
Gold(III) acetate	Fisher	AA3974206	Material for primary hybrid nanoparticles synthesis
Hexane	Fisher	H292-1	Material for primary hybrid nanoparticles synthesis
Phenyl ether 99%	Fisher	AC13060-0025	Material for primary hybrid nanoparticles synthesis
1,2-Hexadecanediol 90%	Sigma	213748-50G	Material for primary hybrid nanoparticles synthesis
Oleylamine 70%	Sigma	O7805-100G	Material for primary hybrid nanoparticles synthesis
Sodium dodecyl sulfate	Fisher	BP166-100	Cluster synthesis
Sodium citrate dihydrate	Sigma	W302600	Cluster synthesis
Monoclonal anti-EGF receptor antibody	Sigma	E2156	Cell labeling specificity test
Monoclonal anti-HER2 antibody	Sigma	AMAB90627	Cell labeling specificity test
Sodium periodate	Sigma	311448	Oxidate Fc region of antibodies
Dithiolaromatic PEG6-CONHNH ₂	SensoPath Technologies	SPT-0014B	Heterofunctional linker for antibody conjugation to nanoclusters
Methoxy-PEG-thiol, 5 k	Creative PEGworks	PLS-604	Passivate the remaining gold surface after antibody conjugation
Amicon Ultra-4 centrifugal filter unit with Ultracel-10 membrane	Millipore	UFC801008	Protein purification
HEPES	Sigma	H3375	Buffer
PBS, 1x solution	Fisher	BP2438-20	Buffer
UV-Vis spectroscopy	BioTek	Synergy HT	Obtain spectrum
Centrifuge	Eppendorf	5810R	Separation

Transmission Electron Microscope	FEI	TECNAI G2 F20 X-TWIN	Obtain morphology of nanostructures
Upright microscope	Leica	DM6000	Obtain dark-field images
Sonicator	Branson	1510	Sonication
Carbon film 300 mesh grid	EMS	CF300-Cu	TEM imaging
96-well plate	Corning	09-761-145	UV-Vis reading plate