

# Biofunctionalization of Magnetic Nanomaterials

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## Materials

Name	Company	Catalog Number	Comments
2 mL tube (snap-cap Microcentrifuge)	Eppendorf, Fisherscientific	05-402-7	
2-N-Morpholino EthaneSulfonic acid hydrate 99% (MES)	Thermoscientific	AC172590250	Concentration 0.1 M and pH 4.7
3-3-Dimethyl-aminopropyl Carbodiimide (EDC)	Thermofisher	PG82079	
3-AminoPropyl-Tri-Ethoxy-Silane (APTES)	Sigma Aldrich	919302	
5 mL glass tube	Fisherscientific	03-339-22C	
96-well plate ( flat bottom)	Sigma Aldrich	CLS3595	
Anti-CD44 antibody	BD Biosciences	550990	Clone 515, concentration 1 mg/mL
APTES ((3-Aminopropyl)triethoxysilane), 99%	Sigma Aldrich	919-30-2	Concentration 99%
BCA assay (Pierce BCA Protein Assay Kit)	Thermofisher	23225	
Bovine Serum Albumin solution (BSA)	Sigma Aldrich	9048-46-8	Concentration 35%
Cell incubator	Thermofisher	50116047	
Cell viability reagent	AlamarBlue, Thermofisher	DAL1025	
Colon cancer cells - HCT116 cell line	ATCC	430641	
Hardwood Hammer			Any hammer tool can be used, there is no specific brand.
Inductively coupled plasma Mass Spectrometer (ICP-MS)	Perkin Elmer	ELAN 9000 ICP-MS	The used software is "Elan instrument control session"
Laboratory Retort Stand with Clamp	RVFM	13-0140	This is used to handle the 5 mL glass tube in the sonicator bath.
Magnetic rack (DynaMag-2 Magnet)	Thermofisher	12321D	
McCoy's 5A Medium 1x	Gibco	16600082	
Microplate reader (Bio-Rad xMark Absorbance Spectrophotometer)	Bio-Rad	1681150	Microplate Manager 6 software (#168-9520)
Phosphate buffered saline (PBS) 10x	Gibco	14200067	Concentration 0.1 M (No calcium, no magnesium)
Phosphate buffered saline (PBS) 1x	Gibco	14190136	Concentration 0.01 M (No calcium, no magnesium)

Plate shaker (Microplate Genie)	Scientific Industries (Genie)	SI-0400	
Single Edge Razor blades	Polysciences	08410-1	
Sodium hydroxide (NaOH)	Sigma Aldrich	1310-73-2	Concentration 1 M, pH 13
Sulfo-N-HydroxySulfosuccinimide (sulfo-NHS)	ThermoFisher	106627-54-7	
Trypsin	ATCC	30-2101	
Tube rotator	VWR	10136-084	
Tube shaker (Eppendorf Thermomixer R Mixer, 2.0 mL)	Eppendorf, Fisherscientific	05-400-204	
Ultrasonic bath (2510)	Branson	2489502	