

Materials List for:

Paper-based Devices for Isolation and Characterization of Extracellular Vesicles

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Materials

Name	Company	Catalog Number	Comments
Chromatography Paper	GE Healthcare Life Sciences	3001-861	Whatman® Grade 1 cellulose paper
(3-Mercaptopropyl) trimethoxysilane	Sigma Aldrich	175617	This chemical reacts with water and moisture and should be applied inside a nitrogen-filled glove bag. Avoid eye and skin contact. Do not breathe fumes or inhale vapors.
Ethanol	Fisher Scientific	BP2818	Absolute, 200 Proof, molecular biology grade
Bovine serum albumin (BSA)	BioShop Canada Inc.	ALB001	Often referred to as Cohn fraction V.
<i>N</i> -γ-maleimidobutyryloxy succinimide ester (GMBS)	Pierce Biotechnology	22309	GMBS is an amine-to-sulfhydryl crosslinker. GMBS is moisture-sensitive.
Avidin	Pierce Biotechnology	31000	NeutrAvidin has 4 binding sites for biotin and its pI value is 6.3, which is more neutral than native avidin
Biotinylated mouse anti-human anti-CD63	Ancell	215-030	clone AHN16.1/46-4-5
biotinylated annexin V	BD Biosciences	556418	Annxin V has a high affinity for phosphatidylserine (PS)
Primary anti-CD9 and secondary antibody	System Biosciences	EXOAB-CD9A-1	The secondary antibody is horseradish peroxidase-conjugated
Serum separation tubes	BD Biosciences	367991	Clot activator and gel for serum separation
Annexin V binding buffer	BD Biosciences	556454	10x; dilute to 1x prior to use.
TMB substrate reagent set	BD Biosciences	555214	The set contains hydrogen peroxide and 3,3',5,5'-tetramethylbenzidine (TMB)

Name	Company	Catalog Number	Comments
RNA isolation kit	Life Technologies	AM1560	MirVana RNA isolation kit
Polyvinylpyrrolidone-based RNA isolation aid	Life Technologies	AM9690	Plant RNA isolation aid contains polyvinylpyrrolidone (PVP) that binds to polysaccharides.
RNA cleanup kit	Qiagen Inc.	74004	MinElute RNA cleanup kit is designed for purification of up to 45 µg RNA.
Plasma chamber	March Instruments	PX-250	
Scanning electron microscope	Hitachi Ltd.	S-4300	

Desktop scanner	Hewlett-Packard Company	Photosmart B110	8-bit color images were captured. Cameras and smart phones may be also used.
Image-record system	J&H Technology Co	GeneSys G:BOX Chemi-XX8	16-bit fluroscence images were captured. Fluroscence microscopes may be also used.