

Single Step Isolation of Extracellular Vesicles from Large-Volume Samples with a Bifurcated A4F Microfluidic Device

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Materials

Name	Company	Catalog Number	Comments
0.1 µm carboxylate FluoSpheres	Invitrogen	#F8803	Stock concentration: 3.6 x 10 ¹³ beads/mL (LOT dependent)
0.5 mL microcentrifuge tubes	Starstedt	72.704	
1 mL Luer cone syringe single use without needle	RAYS	TUB1ML	
1.0 µm polystyrene FluoSpheres	Invitrogen	#F13083	Stock concentration: 1 x 10 ¹⁰ beads/mL (LOT dependent)
10 mL Serological pipettes	Sarstedt	86.1254.001	
15 mL (100k) Amicon Ultra centrifugal filters	Merck Millipore	UFC910024	
2.0 mL Protein LoBind tubes	Eppendorf	30108132	
20 mL syringes	BD PlastikPak	10569215	
250 µm ID polyether ether ketone tubing	Darwin Microfluidics	CIL-1581	
3 kDa MWCO centrifugal filter units	Merck Millipore,	UFC200324	
5 mL Medical Syringe without Needle	Anhui Hongyu Wuzhou Medical	159646	
50 mL conical tubes	Sarstedt	62.547.254	
70 Ti fixed angle ultracentrifuge rotor	Beckman Coulter	337922	
800 µm ID polytetrafluoroethylene tubing	Darwin Microfluidics	LVF-KTU-15	
96 well microplate, f-bottom, med. binding	Greiner Bio-One	655001	ELISA plate
B-27 Supplement (50x), serum free	Thermo Fisher Scientific	17504044	
Bovine serum albumin	SigmaAldrich	A7906-100G	

COC Topas microscopy slide platform	Microfluidic Chipshop	1000002	
COC Topas microscopy slide platform 2 x 16 Mini Luer	Microfluidic Chipshop	10000387	
Elveflow OB1 pressure controller	Elvesys Group		
Luer connectors	Darwin Microfluidics	CS-10000095	
Mask aligner Suss MA/BA6	SUSS MicroTec Group		
Mixer Thinky ARE-250	Thinky Corporation		
NanoSight NS300	Malvern Panalytical	NS300	nanoparticle analyzer
Optical microscope Nikon Eclipse LV150N	Nikon Metrology NV		
OSTE 322 Crystal Clear	Mercene Labs		
PBS TABLETS, Ca/Mg free. Fisher Bioreagents. 100 g	Fisher Scientific	BP2944-100	
PC membrane (50 nm pore diameter, 11.8% density)	it4ip S.A., Louvain-La Neuve, Belgium		
Petri dishes, sterile	Sarstedt	82.1472.001	
Plasma Asher GIGAbatch 360 M	PVA TePla America, LLC		
qEVorignal/35 nm column	Izon	SP5	SEC column
QSIL 216 Silicone Elastomer Kit	PP&S		
Resin Tough Black	Zortrax		
SW40 Ti swing ultracentrifuge rotor	Beckman Coulter	331301	
Syringe pump	DK Infusetek	ISPLab002	
T175 suspension flask	Sarstedt	83.3912.502	
TIM4-Fc protein	Adipogen LifeSciences	AG-40B-0180B-3010	
TMB (3,3',5,5'-tetramethylbenzidine)	SigmaAldrich	T0440-100ML	Horseradish peroxidase substrate
Tween20	SigmaAldrich	P1379-100ML	
Ultracentrifuge Optima L100XP	Beckman Coulter		
Ultrasonic cleaning unit P 60 H	Elma Schmidbauer GmbH		
Universal Microplate Spectrophotometer	Bio-Tek instruments	71777-1	
Urine collection cup, 150mL, sterile	APTACA	2120_SG	
Whatman Anotop 25 Syringe Filter	SigmaAldrich	68092002	
Zetasizer Nano ZS	Malvern Panalytical		dynamic light scattering (DLS) system
Zortrax Inkspire	Zortrax		