

Purified Extracellular Vesicles

Save time and get pure EVs

HBM-LS lyophilized EVs are isolated through a combination of Tangential Flow Filtration (TFF) and size exclusion chromatography (SEC). Vesicles are subsequently quantified and validated for marker expression and particle number by NTA (Zetaview, Particle Metrix). Lyophilized EVs are easy to ship and stable for long term storage (up to 36 months).

SMALL EVs (s-EVs)/EXOSOMES: vesicles with diameter comprised between 40 and 120 nm, mostly including Exosomes but also small microvesicles originated by the cell membrane.

LARGE EVs (l-EVs)/MICROVESICLES: vesicles larger than 150 nm diameter, mostly microvesicles originated by the cell membrane.

Characteristics

- High purity
- Small EVs/Exosome size distribution: 50-120 nm
- Large EVs/Microvesicle size distribution: 150-500 nm

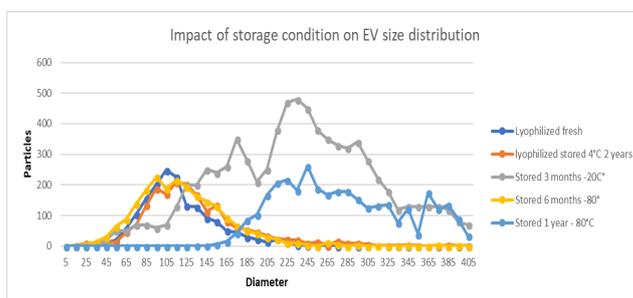
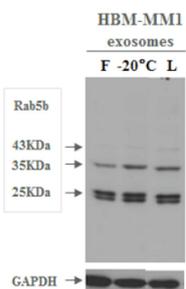
Applications

- Positive control for multiple techniques
- Biomarker discovery
- EV phenotyping and OMICS analyses

Purified small and large EVs from human biofluids		
Plasma	Serum	Urine
Purified small and large EVs from cell conditioned media		
Colorectal carcinoma	HCT116, HT29, COLO1	
Prostate carcinoma	PC3, LnCAP	
Lung carcinoma	A549, NCI-H1975	
Chronic leukemia	K562	
Glioblastoma	U87	
Neuroblastoma	SK-N-SH	
Melanoma	MM1, B16F10 (mouse melanoma)	
H. embryonic kidney	HEK293	
Mesenchymal stem cells	Primary cells from human adipose tissue (pool)	

Upon request, EV purification can be performed from a large list of cell lines.
Contact: info@hansabiomed.eu

Lyophilization preserves EVs properties



WB of Fresh (F), Frozen (-20) and Lyophilized exosomes (L). Particle size distribution chart of Exosomes stored lyophilized or frozen.

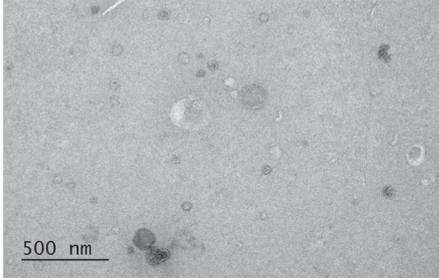
Advantages

- Long term storage stability (36 months)
- Easy to reconstitute
- Available from a large biobank of cell lines

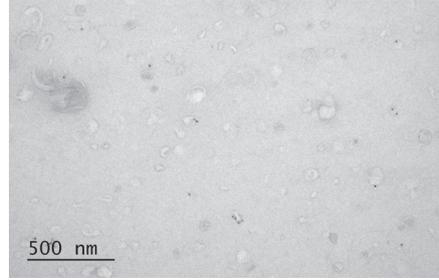
The best standard for your EV research

Application in Extracellular Vesicle research

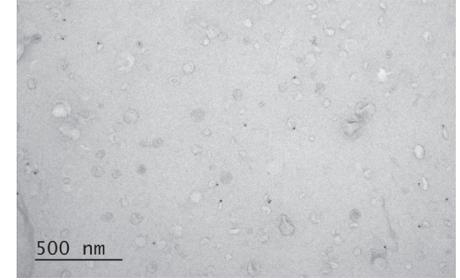
Electron Microscopy (EM) and Immuno Electron Microscopy (IEM)



EM of lyophilized Small EVs/Exosomes from HCT116 cell line (HBM-HCT116-100)



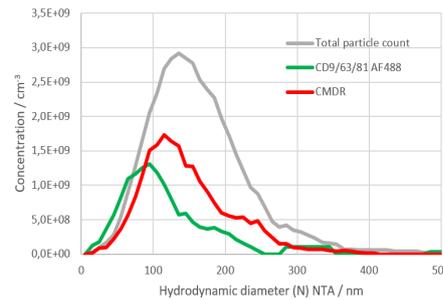
CD81 detection by IEM in HCT116 lyophilized exosomes. Anti-CD81(HBM-LS)



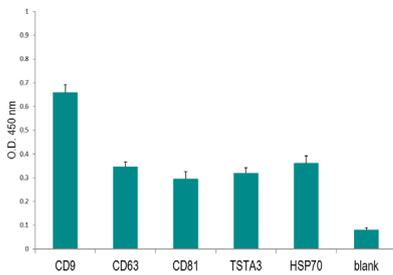
CD9 detection by IEM in HCT116 lyophilized Exosomes. Anti-CD9(HBM-LS)

Nanoparticle tracking analysis in scattered and fluorescence mode

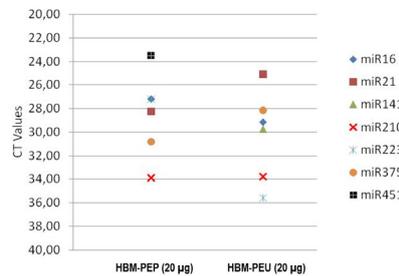
Lyophilized EVs can be used as positive control for NTA in scattered and fluorescence mode. HCT116 exosomes were labeled respectively with CMDR (ThermoFisher) and a mixture of Anti-CD9, Anti-CD63, Anti-CD81 Alexa-Fluor-488 conjugated (ThermoFisher). The dye excess has been removed by SEC using mini-PURE-EVs columns.



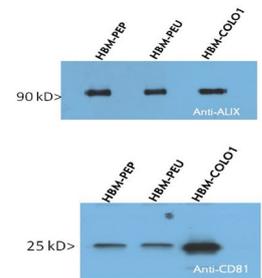
Phenotyping assays and marker analysis by different techniques



ELISA phenotyping of lyophilized Exosomes from human serum (HBM-PES-##)



miRNAs in lyophilized Exosomes from human plasma (HBM-PEP) and urine (HBM-PEU)



Detection by WB of CD81 and Alix (HBM-LS antibodies) in different lyophilized Exosomes