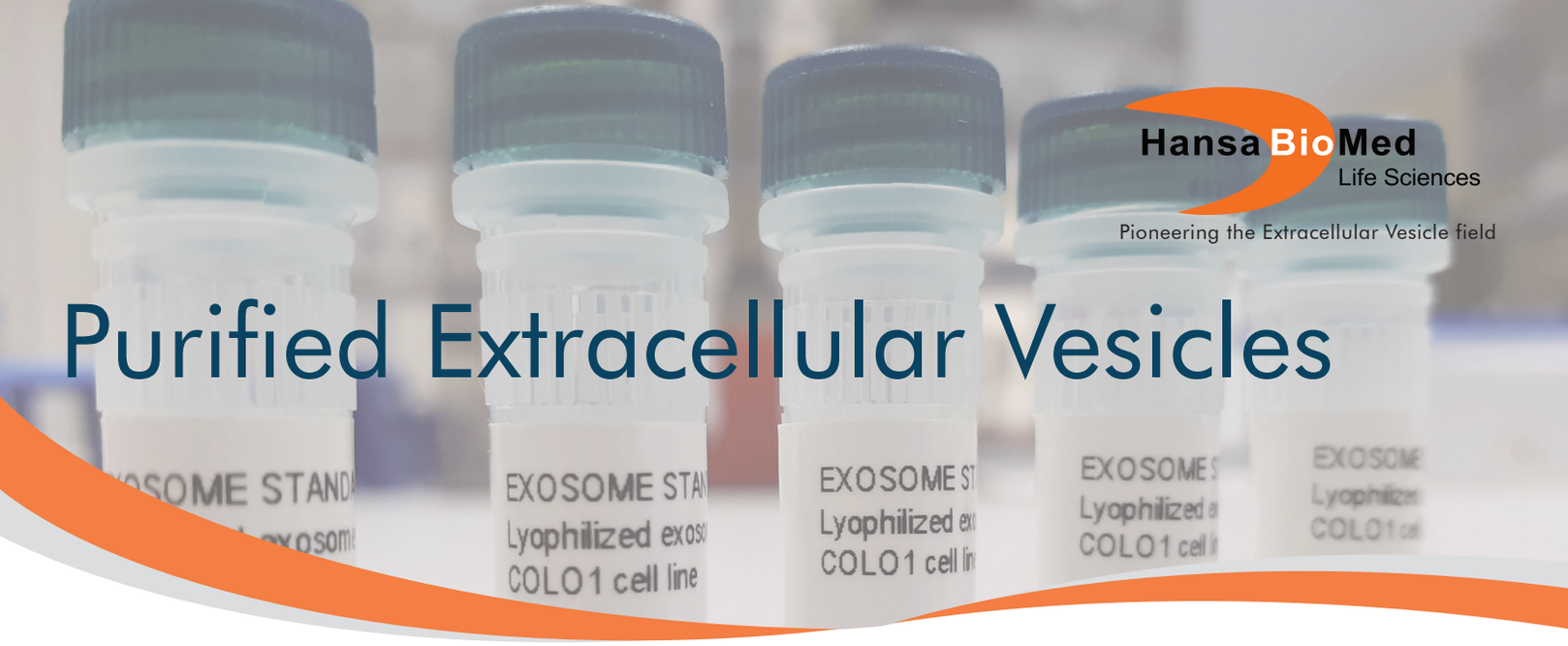


Hansa BioMed Life Sciences

Pioneering the Extracellular Vesicle field

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). Vesilces 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 140 nm.

LARGE EVs (l-EVs)/MICROVESICLES: vesicles larger than 150 nm diameter.

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	
Mesenchyman 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		

Characteristics

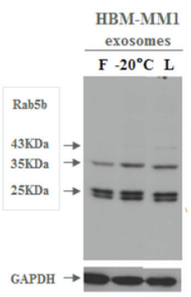
- High purity
- Small EVs/Exosome size distribution: 50-120 nm
- Large EVs/Microvesilce size distribution: 150-500 nm

Applications

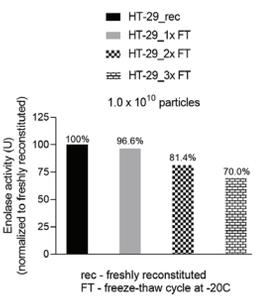
- Positive control for multiple tecniques
- Biomarker discovery
- EV phenotyping and OMICS analyses

Lyophilization preserves EV properties

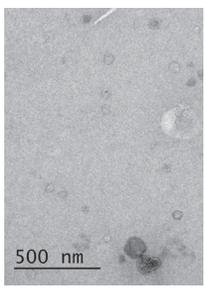
A- MARKER EXPRESSION



B- FUNCTIONAL PROPERTIES



C- MORPHOLOGY



A- WB of Freash (F), Frozen (-20) and (L) Lyophilized EVs (HBM-MM1) . B- Stability of enolase activity in lyophilized HT29 EVs (HBM-HT29). C- TEM image of lyophilized HCT116 EVS (HBM-HCT).

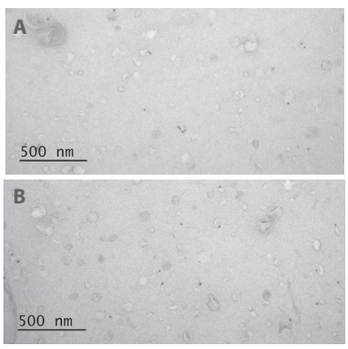
Advantages

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

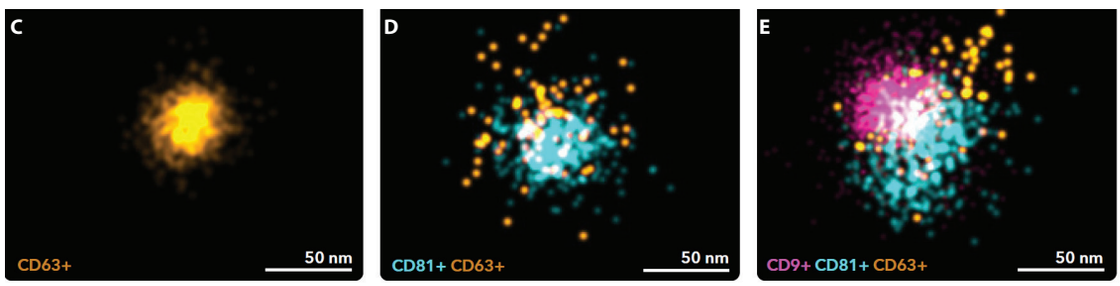
The best standard for your EV research

Application in Extracellular Vesicle research

Single EV phenotyping by Immuno-EM and super-resolution fluorescence microscopy

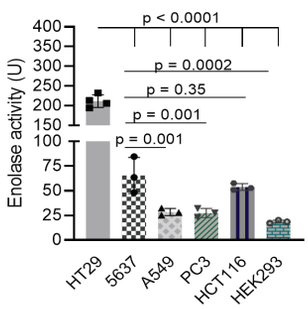


Detection by IME of CD81 (A) and CD9 (B) in HCT116 lyophilized exosomes. Anti-CD81and Anti-CD9 HBM-LS.

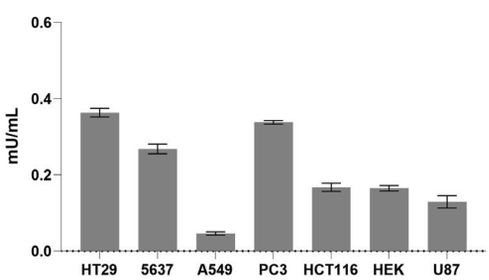


3-color dSTORM image of CD9-ATTO488, CD63-Alexa Fluor®-647 and CD81-Alexa Fluor® 555 EVs from HCT116 cell line (HBM-HCT-100) on the ONI Nanoimager (ONI). Single EV with presenting only a single tetraspanin marker on their surface (C). Single EV presenting two makers (D). Single EV presenting three markers (E).

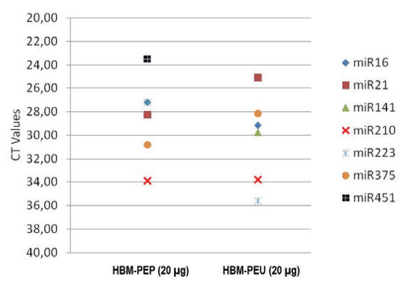
Functional and enzymatic assays, profiling of miRNA



Enolase activity in EVs isolated from conditioned media of various cell lines. $1x10^{10}$ particles were used.

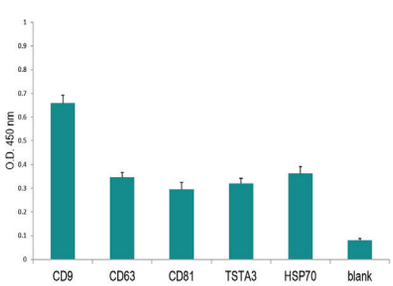


Acetylcholinesterase activity in EVs isolated from conditioned media of various cell lines. $1x10^{10}$ particles were used.

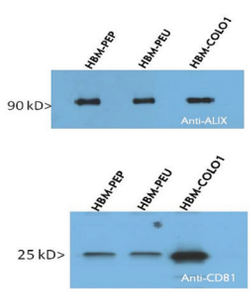


miRNAs in lyophilized EVs from human plasma (HBM-PEP) and urine (HBM-PEU).

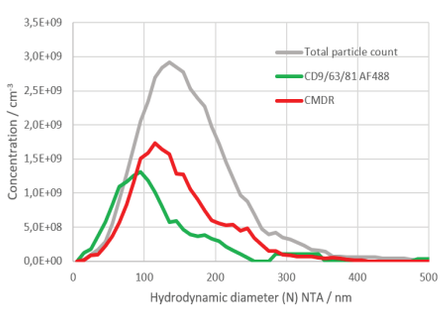
EV phenotyping by fluorescent NTA (F-NTA) and immunoassays (ELISA, WB)



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



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



HCT116 EVs (HBM-HCT) Labeled with CMDR (Thermofisher) and a mixture of Anti-CD9, Anti-CD63, Anti-CD81 Alexa488 conjugated (Thermofisher). The dye excess removed by SEC mini-PURE-EVs columns.

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