



EXO-Prep



Isolate successfully exosomes from body fluids and cell media

Exosomes one step isolation from a wide range of biofluids or cell culture media

Isolate exosome from your sample by EXO-Prep

EXO-Prep is a new and efficient method for exosome isolation from biofluids and from cell culture media. Exosomes are quickly isolated from your sample by an incubation step with EXO-Prep precipitation reagent. Exosome pellet is subsequently collected by one-step centrifugation and can be easily resuspended in PBS 1X. Solubilized exosomes are suitable for different downstream analyses such as proteomic or nucleic acids marker profiling, NTA, FACS etc.

Cat. Code	Volume	Reactions
EXO-Prep for Exosome Isolation from Plasma and Serum		
HBM-EXP-B5	5 ml	180 reactions Plasma, 80 reactions Serum
HBM-EXP-B10	10 ml	350 reactions Plasma, 160 reactions Serum
HBM-EXP-B20	20 ml	700 reactions Plasma, 320 reactions Serum
EXO-Prep for Exosome Isolation from Cell Media		
HBM-EXP-C25	25 ml	25 reactions
HBM-EXP-C50	50 ml	50 reactions
EXO-Prep for Exosome Isolation from Urine		
HBM-EXP-U25	30 ml	25 reactions
HBM-EXP-U50	60 ml	50 reactions

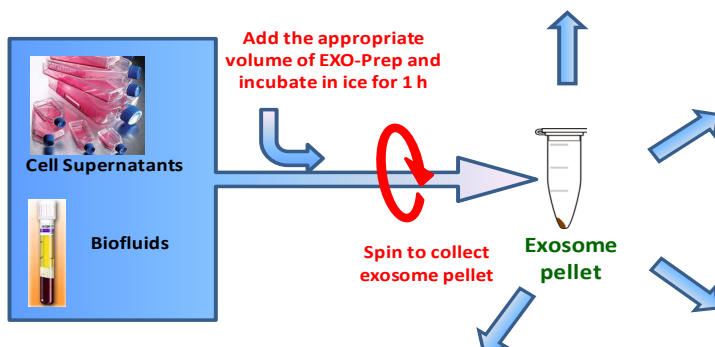
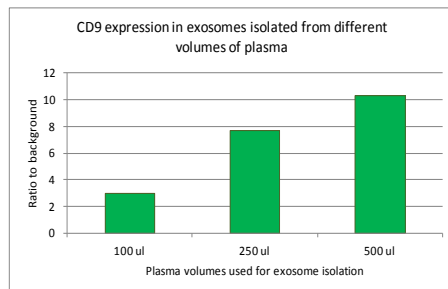
Applications

- Single step isolation of exosomes from biofluids and cell supernatants.
- Isolate the overall exosome population in a sample.
- Isolated exosomes can be used for NTA analysis.
- Isolated exosomes are suitable for protein profiling (WB, ELISA, FACS).
- Isolated exosomes are suitable for nucleic acid extraction and profiling.

EXO-Prep: working procedure and potential applications

ELISA assay:

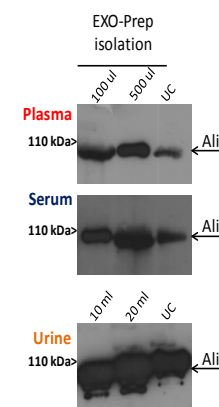
Exosomes isolated by EXO-Prep are suitable for protein profiling using ELISA assay. ELISA performed on HBM immunoplate for overall exosome capture from human plasma (HBM-POF)



Western blotting:

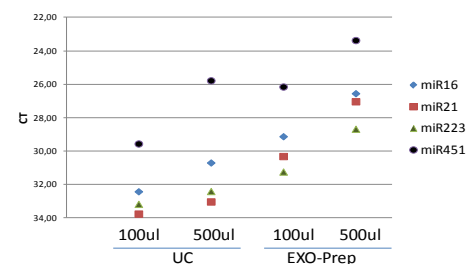
Western blotting:

Detection of Exosome marker Alix in protein lysates (30 ug) from exosomes isolated with EXO-Prep from 100 ul and 500 ul of plasma/serum and 10 and 20 ml of whole urine. Protein lysates (30 ug) from exosomes purified by ultracentrifugation (UC) were used as control.



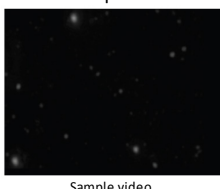
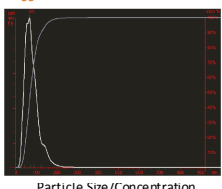
Nucleic acids extraction and analysis:

Exosomes previously isolated by EXO-Prep or ultracentrifugation (UC) from 100 ul or 500 ul of plasma were used for total RNA extraction and profiling of four exosomal miRNAs. Exosome isolated with EXO-Prep are enriched in miRNAs compared to those purified by ultracentrifugation from the same amount of plasma.



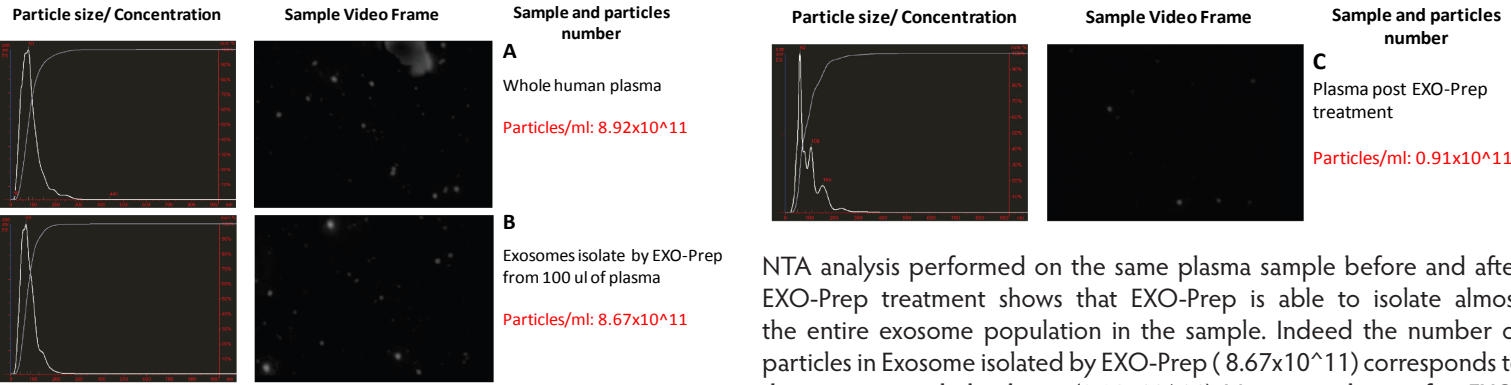
Nano Tracking Analysis (NTA)

Exosome isolated from 100 ul of plasma



NTA performed on exosomes isolated by EXO-Prep and resuspended in 100 ul of PBS 1X. Size of particles is in accordance to the size of exosome vesicles (50-120 nm)

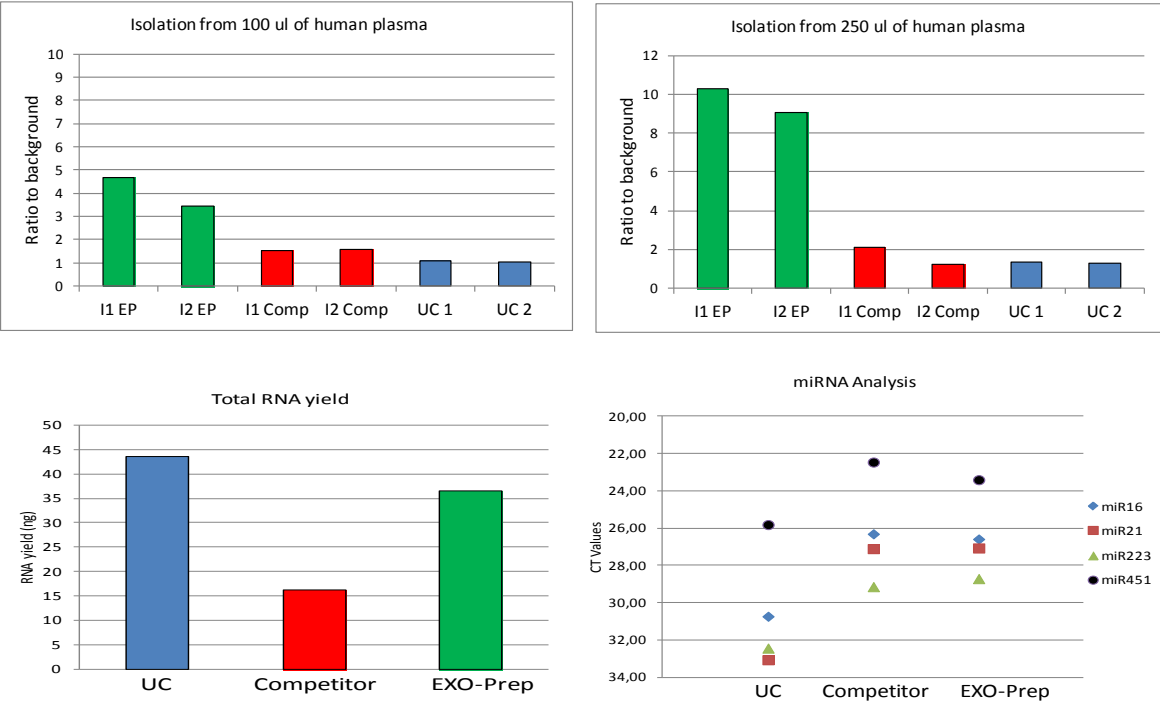
EXO-Prep isolate the overall exosome population in your sample in one single step



NTA analysis performed on the same plasma sample before and after EXO-Prep treatment shows that EXO-Prep is able to isolate almost the entire exosome population in the sample. Indeed the number of particles in Exosome isolated by EXO-Prep (8.67×10^{11}) corresponds to that present in whole plasma (8.92×10^{11}). Viceversa plasma after EXO-Prep treatment remains depleted of microvesicles (0.91×10^{11}).

1. NTA and exosome detection in whole plasma (A), EXO-Prep isolated exosomes resuspended in 100 ul of PBS 1x (B) and plasma post EXO-Prep treatment (C).

EXO-Prep guarantees exosome isolation form complex biofluids, high performances and cheaper price than competitor products



2. CD9 expression of plasma exosomes from two healthy individuals (100 μ l and 250 μ l) using EXO-Prep (EP) isolation reagent compared to a competitor reagent (Comp) and exosomes purified by ultracentrifugation (UC).

3. RNA extraction and profiling of 4 exosome miRNA from exosomes isolated by EXO-Prep, a Competitor reagent and ultracentrifugation (UC). 100 μ l of plasma sample have been used.

Characteristics		EXO-Prep	Competitor
Exosome isolation from cell supernatants		Yes	Yes
Exosome isolation from complex biofluids (plasma, serum, urine)		Yes	Yes, but pellet is hard to solubilize
Plasma exosome isolation	Thrombin pretreatment	Not required	Necessary
	Pellet solubility	Easy	Very hard
Minimum sample amount		100 μ l	250 μ l
Isolated exosome are intact and suitable for ELISA assay		Yes	No suitable for ELISA quantification
Suitable for nucleic acids extraction and analysis		Yes	Yes
Price (for 5 ml of reagent)		••	•••

EXO-Prep is a fast and efficient method for exosome isolation from biofluids or cell culture media. In particular, when compared to a competitor product on the market, EXO-Prep allows exosome isolation from a smaller volume (100 μ l) of complex biofluids as plasma, without thrombin pretreatment or difficult solubilization of exosome pellet. EXO-Prep-isolated exosomes are suitable for different analyses: protein profiling via western blotting or ELISA (Fig 2), nucleic acids extraction and miRNA/mRNA profiling (Fig 3), FACS.