ExoLutE®

Exosome Isolation Kits RESEARCH USE ONLY

Rosetta Exosome®

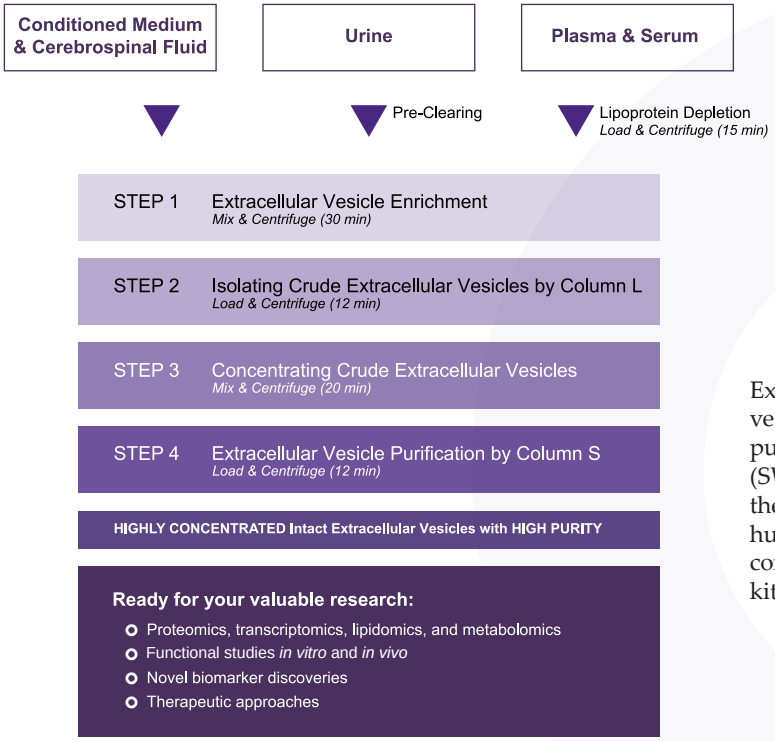
Next-generation technology for isolating exosomes or extracellular vesicles

- A simple, ultracentrifugation-free, fast, reliable, and reproducible technology
- 4Hs: Isolate **HI**GHLY CONCENTRATED intact exosomes or extracellular vesicles with **HI**GH PURIFICATION FOLD, **HI**GH YIELD, and **HI**GH PURITY

Understanding the complexity and emergent properties of exosomes or extracellular vesicles is essential to decode the secret of life as well as to develop innovative exosome-based diagnostic methods and therapeutics for intractable diseases. However, the isolation of exosomes or extracellular vesicles is still considered as a major challenge.

Based on 20 years of research experience in exosome or extracellular vesicle biology and medicine, Rosetta Exosome Inc. launched ExoLutE® Exosome Isolation Kits. By combining multiple proprietary next-generation platform technologies, our ExoLutE® Exosome Isolation Kits guarantee exosome or extracellular vesicle research, promoting the discovery of novel biomarkers, and clinical applications.

Overall Isolation Procedure



ExoLutE® showed a higher extracellular vesicle purification yield with higher purity from human adenocarcinoma cell (SW480) conditioned medium, as well as the urine, plasma, and serum from normal human subjects, compared with other commercial extracellular vesicle isolation kits.

Isolation Kit Selection Guide

Biological Fluid	Recommended Kit	Catalog Number	Units/Kit
Conditioned Medium	ExoLutE® Conditioned Medium	EX-01	10
	Nanoparticle-Free FBS*	ES-01	50 mL
Cerebrospinal Fluid	ExoLutE® Conditioned Medium	EX-01	10
Urine	ExoLutE® Urine	EX-02	10
Serum & Plasma	ExoLutE® Plasma & Serum	EX-03	10

FBS*: fetal bovine serum

ExoLutE® Ordering Information

Website : www.rosettaexosome.com
E-mail : support@rosettaexosome.com

Rosetta Exosome® www.rosettaexosome.com

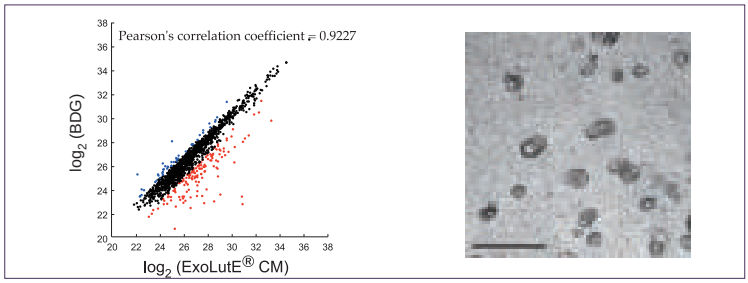
IMPORTANT NOTE: All currently available ExoLutE® Exosome Isolation Kits are designed for the purification of EXOSOMES and MICROVESICLES, collectively as EXTRACELLULAR VESICLES.

ExoLutE®
CONDITIONED MEDIUM
Exosome Isolation Kit

Comparison with BDG Method (Ultrafiltration-Buoyant Density Gradient Ultracentrifugation-Ultracentrifugation)

	ExoLutE® Conditioned Medium	BDG Method	ExoLutE® Conditioned Medium/BDG Method
Purification Fold	21,781-fold	126,025-fold	0.17
Extracellular Vesicle Yield			
Protein Amount (μg)	9.4	1.6	**5.9**
Number of Extracellular Vesicles	4.9×10^{10}	0.85×10^{10}	**5.8**
Purity of Extracellular Vesicles (10^9 particles/μg protein)	5.3	5.3	**1.0**
Final Concentration of Extracellular Vesicles (particles/mL)	2.0×10^{12}	1.6×10^{12}	**1.3**
Number of Identified Proteins by Proteomics	1,702	1,571	**1.1**

From 8 mL of human adenocarcinoma cell (SW480) conditioned medium

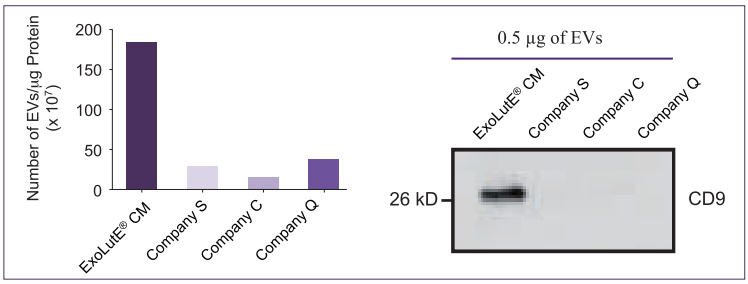


SW480 Extracellular Vesicle Proteomics

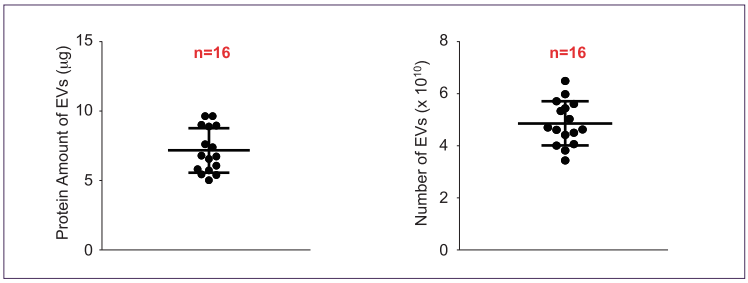
MIA PaCa-2 Extracellular Vesicles (Scale bar: 500 nm)

ExoLutE® Conditioned Medium has shown the following:
1) A very similar size distribution, morphology, protein composition, and purity, but
2) An approximately six-fold higher purification yield compared with BDG method.

Comparison with Other Commercially Available Isolation Kits



Reproducibility



High Purity: Removes > 99% of contaminating proteins

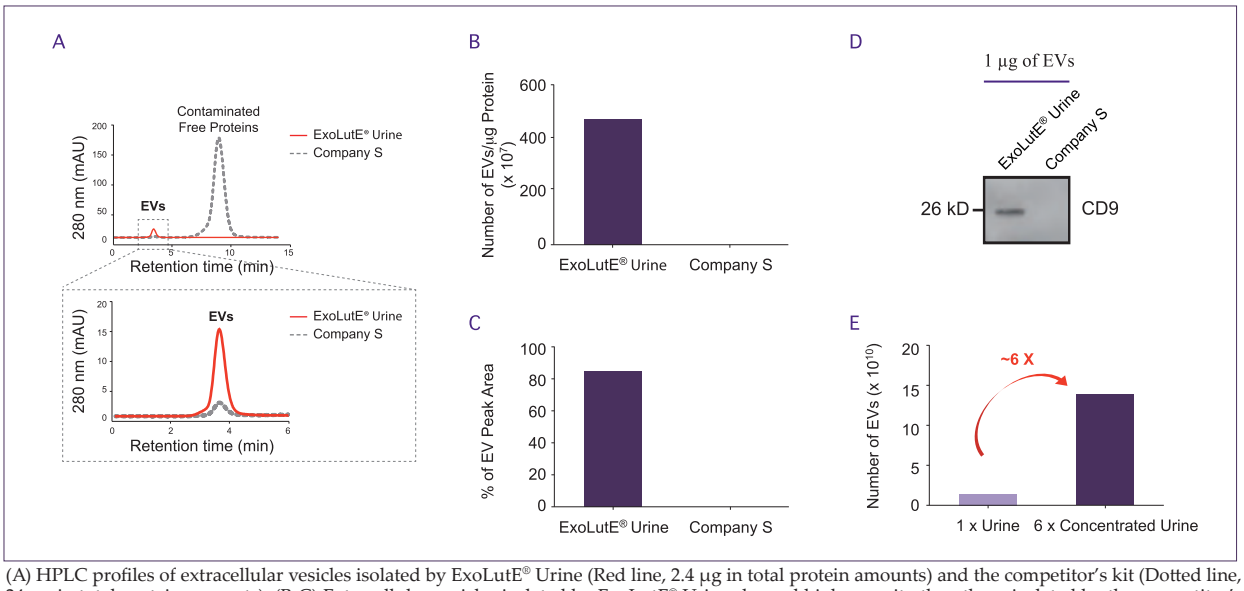
High Yield: One microgram of highly pure extracellular vesicles /mL of SW480 cell conditioned medium

ExoLutE®
URINE
Exosome Isolation Kit

Simple Method for Pre-Clearing the Urine

Unknown aggregates are present in stored or concentrated urine. Adding proprietary Sol U turns urine clear and transparent without any loss of extracellular vesicles and increases the final purity of isolated extracellular vesicles.

Comparison with Other Commercially Available Isolation Kit & Scalability

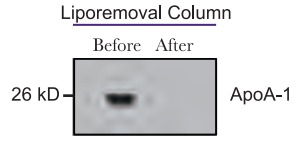


(A) HPLC profiles of extracellular vesicles isolated by ExoLutE® Urine (Red line, 2.4 µg in total protein amounts) and the competitor's kit (Dotted line, 24 µg in total protein amounts). (B-C) Extracellular vesicles isolated by ExoLutE® Urine showed higher purity than those isolated by the competitor's kit, as shown by the ratio of number of extracellular vesicles to total protein amounts (B) and percentages of extracellular vesicle peak area (C). (D) Extracellular vesicles isolated by ExoLutE® Urine showed higher yield than those isolated by the competitor's kit, as shown by Western blot using the equal amounts of extracellular vesicles detected with anti-CD9. (E) Scalability of ExoLutE® Urine. The number of extracellular vesicles isolated from 6X concentrated urine was 6-times higher than that of extracellular vesicles isolated from non-concentrated urine.

ExoLutE®
PLASMA & SERUM
Exosome Isolation Kit

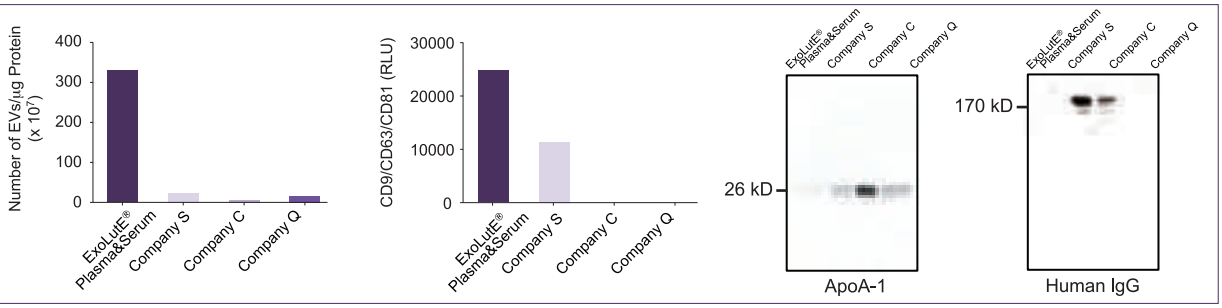
Lipoprotein Depletion

Lipoprotein contamination is one of the main issues for extracellular vesicle isolation from the plasma and serum. Rosetta Exosome Inc. has developed a proprietary liporemoval column.



Lipoprotein Depletion: > 90% of ApoA-1, a major protein component of HDL particles, was depleted from the plasma.

Comparison with Other Commercially Available Isolation Kits



High Purity: Removes > 99% of contaminating proteins and > 90% of lipoproteins
High Yield: Fifty microgram of highly pure extracellular vesicles/mL of normal blood Plasma: Treated with citrate or EDTA

Rosetta Exosome®

Based on 20 years of research experience in exosome biology and medicine, Rosetta Exosome Inc., founded in 2016, has developed proprietary and integrated next-generation platform technologies for the development of innovative exosome-based diagnostic methods and therapeutics for intractable diseases.

Our Team

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ExoLutE® References

1. Extracellular vesicle-mimetic ghost nanovesicles for delivering anti-inflammatory drugs to mitigate Gram-negative bacterial outer membrane vesicle-induced systemic inflammatory response syndrome. *Advanced Healthcare Materials*. 8(4):e1801082, 2019
2. Outer membrane vesicles derived from *Escherichia coli* regulate neutrophil migration by induction of endothelial IL-8. *Frontiers in Microbiology*. 9:2268, 2018

ExoLutE® Ordering Information

Website: www.rosettaexosome.com
E-mail: support@rosettaexosome.com
We also provide comprehensive services for the isolation, characterization, multi-omics, and systems biology of exosomes or extracellular vesicles.

Visit our website for detailed information.

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