



NanoEX™

The Ultimate Automated
Bio-nanoparticle Isolation System



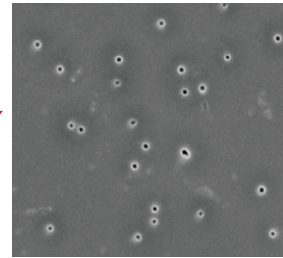
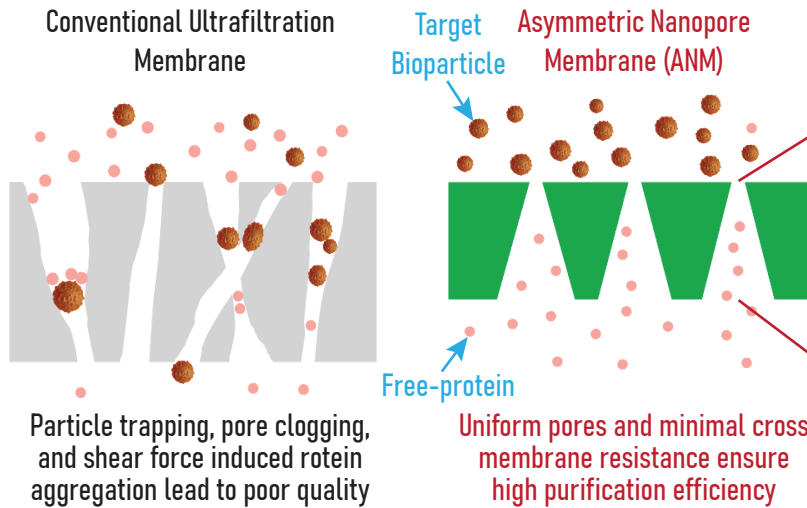
NanoEX™

Groundbreaking Nanotechnology

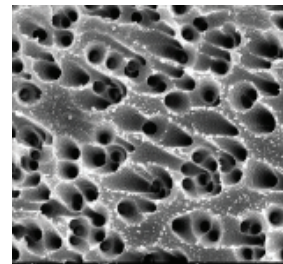
- Patented Asymmetric Nanopore Membrane (ANM) technology (PCT/US2020/050844)
- Highly uniform pore size for superior selectivity
- Asymmetric pores for efficient contaminant removal
- Gentle processing preserves bioparticle integrity and eliminate protein aggregation

Innovative Instrument Design

- Purify ultra-high quality bioparticles from 2-2000 ml sample volume
- Fully automated processing
- Simultaneous purification and enrichment
- Fully enclosed processing avoids environmental and cross-contamination



Uniform pore size (<10% CV) guarantees efficient contaminant removal and minimizes bioparticle loss



Cone-shaped pore geometry with large opening minimizes pass-through resistance of contaminants



Fully Automated Processing

Ultra streamlined workflow



Unparalleled Yield and Purity

Outperforms all existing technologies



Perfect Integrity

Gentle process prevents bioparticle damage



Enrichment

Highly concentrated and pure products



Exceptional scalability

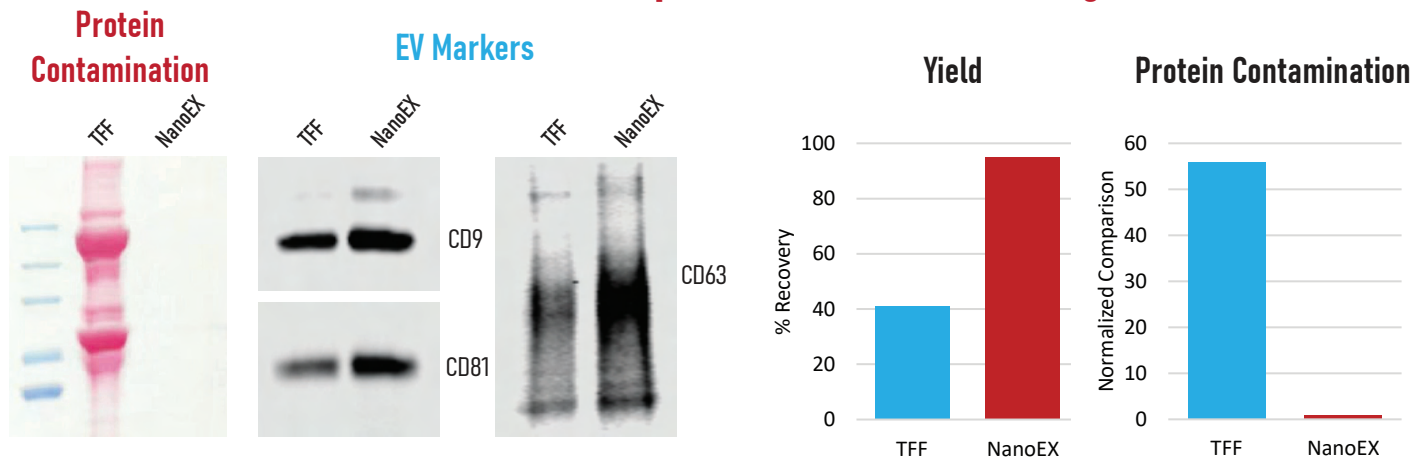
Meets most research and industrial needs

Product Name	SKU	Dimension (cm)	Weight
NanoEX	NE1000	60 (L) X 30 (W) X 40 (H)	14 kg

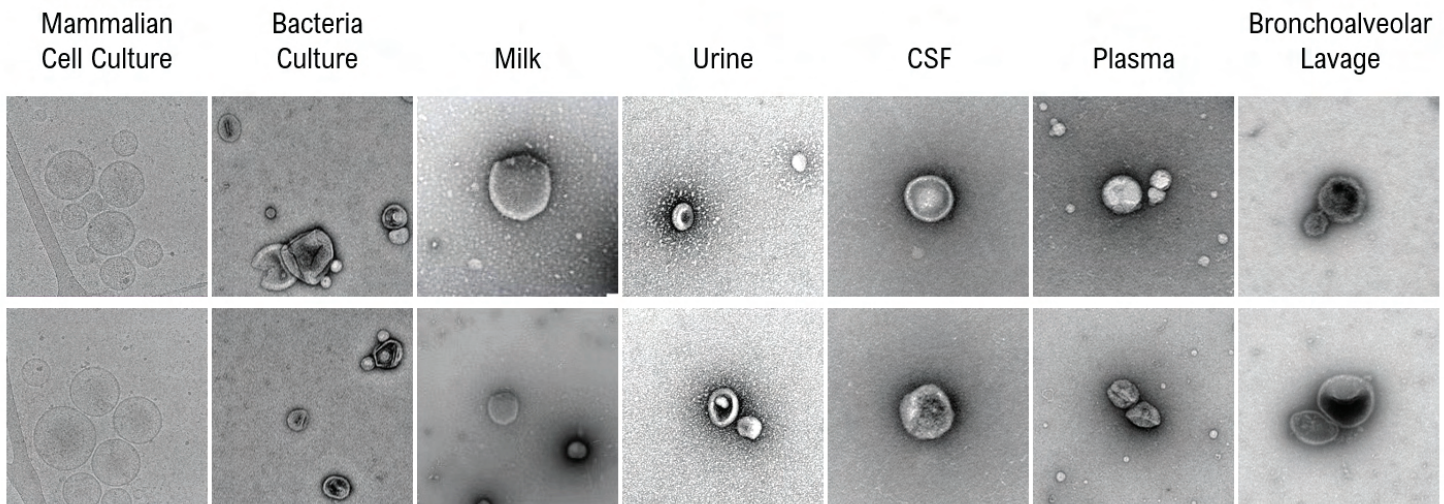
All-around Superior Performance to Existing Technologies

Method	Yield	Purity	Scalability	Automated
NanoEX	++++	++++	+++	Yes
Ultracentrifugation (UC)	++	++	++	No
Polymer Precipitation	++++	+	++	No
Immunoaffinity	+	++++	+	No
Microfluidics	+	+++	+	No
Ultrafiltration	+++	+	++	No
Size Exclusion Chromatography (SEC)	+++	+++	+	No
Tangential Flow Filtration (TFF)	++++	+	++++	Yes

Fundamental Improvement over TFF for Large Scale EV Isolation



Unparalleled Purity from Wide Range of Sample Types



Transmission Electron Microscopy (TEM) images show well-preserved EVs with minimal protein particles



VanoFlow® Cassettes

Powered by the ANM technology, the VanoFlow® Cassettes are used in combination with NanoEX to enable fully enclosed and fully automated isolation of bio-nanoparticles, such as EVs and LNPs. The self-monitoring and feedback control allows push-button processing for optimal isolation efficiency.

One single instrument with versatile cassette selections for all your needs



99.9%
Purity (protein removal)



2-2000 ml
Sample volume



>80%
Recovery rate



10 min
Hands-on time



Up to 25X
Direct EV enrichment



3-5 hr
Processing time



EV Isolation Cassette Selection

Cassette Name	SKU	Input Volume	Output Volume	Size Cutoff	Output EV Conc.	Reusability
VanoFlow-EXO-01	VF-EXO-01	Up to 60 mL	~4.5 mL	30 nm	Up to 10 ¹² /mL	Single Use
VanoFlow-EXO-10	VF-EXO-10	Up to 300 mL	~22 mL	30 nm	Up to 10 ¹² /mL	Reusable
VanoFlow-EXO-20	VF-EXO-20	Up to 600 mL	~35 mL	30 nm	Up to 10 ¹² /mL	Reusable
VanoFlow-EXO-40	VF-EXO-40	Up to 1.2 L	~65 mL	30 nm	Up to 10 ¹² /mL	Reusable
VanoFlow-EXO-60	VF-EXO-60	Up to 2.0 L	~100 mL	30 nm	Up to 10 ¹² /mL	Reusable



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