EXOSOME
ISOLATION

EXODUS

EXODUS M-600

Integrated Multi-Channel Nanoparticle Isolation System

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EXODUS M-600

INTEGRATED MULTI-CHANNEL NANOPARTICLE ISOLATION SYSTEM

Integrated Multi-Channel Nanoparticle Isolation System is an integrated nanoparticle purification and enrichment platform combining multi-channel operation, full automation, and Integrated Isolation technology. Built on a core of ultrasonic nanofiltration, the system integrates multiple Isolation processes with specific impurity removal technologies, enabling fully automated, end-to-end purification, enrichment, and recovery of a wide range of nanoparticles, including exosomes, extracellular vesicle subtypes, viruses and virus-like particles, and lipid nanoparticles. Nanoparticles purified and enriched using the EXODUS system are well suited for a broad spectrum of downstream applications, including characterization and identification, biomarker discovery, and translational research and therapeutic applications.

KEY FEATURES OF EXODUS M-600

Independent Multi-Channel Control

- 6 channels with synchronous or independent operation
- Batch processing of identical samples and flexible parallel isolation of different samples

Integrated Isolation Technology

- Integration of preprocessing and ultrasound-assisted nanofiltration for specific purification
- Enhanced purity of EVs from complex samples

μL–L Volume Coverage

- Sample volumes ranging from microliter to liter scale
- Supports scale-applications from trace clinical samples to large-volume

High Throughput

- Fastest single-run isolation within 15 min
- Maximum throughput of 24 tests/h

AI-Assisted Process Development

- Integrated UV-based protein detection and process tracking
- AI-driven dynamic adjustment of key parameters

KEY FEATURES >>

Independent Multi-Channel Control

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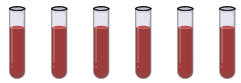


Individual plasma samples

Disease diagnosis: Processes 6 samples in parallel, with preset identical purification protocols and one-click startup, greatly boosting purification efficiency.

Different sample types

Research platform: Handles up to 6 sample types simultaneously, flexibly adapts to purification protocols, enabling multi-project parallel processing.

CM samples under different treatment conditions

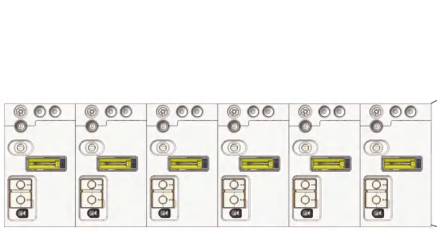
Process optimization: Configures up to 6 different purification protocols simultaneously, significantly improving process development efficiency.

Up to 1.5 L CM samples

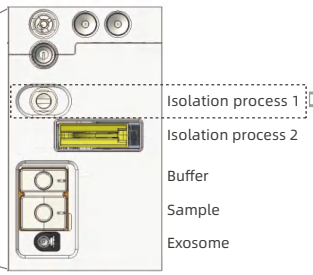
Small-batch production: Processes up to 1.5 L of samples in a single run, meeting EV purification needs from research to clinical translation.

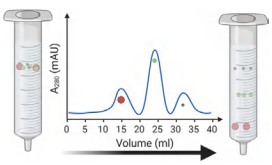
Integrated Isolation Technology

- Integration of preprocessing and ultrasound-assisted nanofiltration for specific purification
- Enhanced purity of EVs from complex samples



Layout diagram of EXODUS M600 system

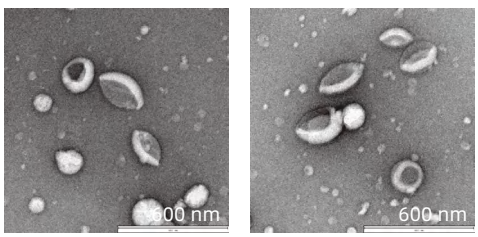




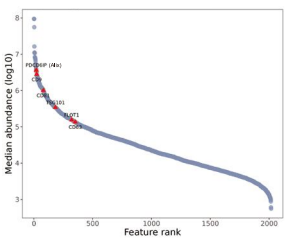
Chromatography or specific impurity-removal technologies

EXODUS combined with complementary technologies improves plasma EVs purity, yielding more proteins and higher abundances of EV marker proteins in proteomic profiling.

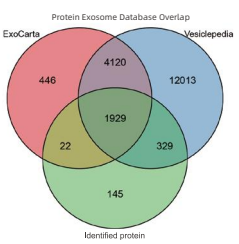
TEM of plasma EVs



Protein rank of plasma EVs



Venn diagram of proteins identified in plasma EVs

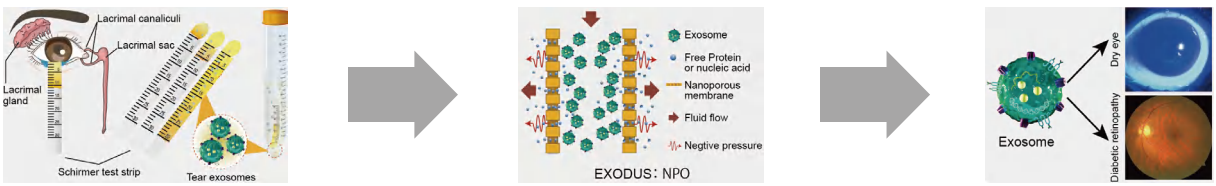


μL-L Volume Coverage

- Sample volumes ranging from microliter to liter scale
- Supports scale-applications from trace clinical samples to large-volume

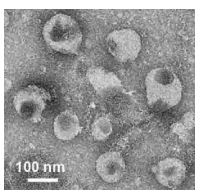
Trace sample EVs

Plasma | Tears | Cerebrospinal fluid | Lipid nanoparticles

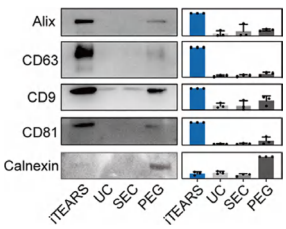


Schematic Diagram of EXODUS-based Isolation of tear EVs

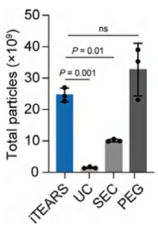
TEM of tear EVs



WB analysis (equal protein: 3 μg)



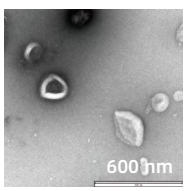
Particle yields



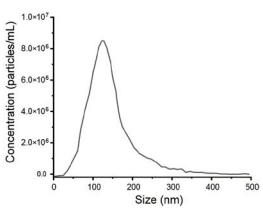
Large-volume sample EVs

Cell culture medium | Bacterial culture medium | Viruses and VLPs | Plant

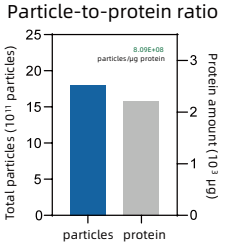
TEM of MSC-EVs



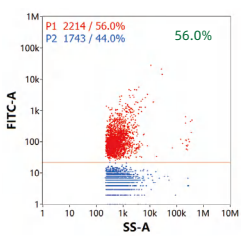
NTA analysis



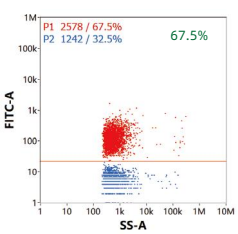
Particle-to-protein ratio



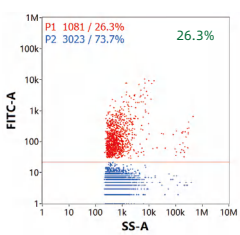
CD81 positive rate



CD9 positive rate

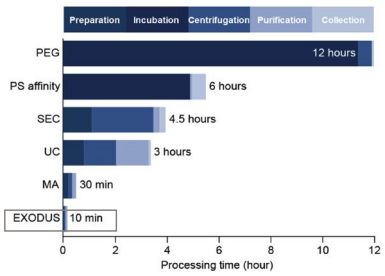


CD63 positive rate



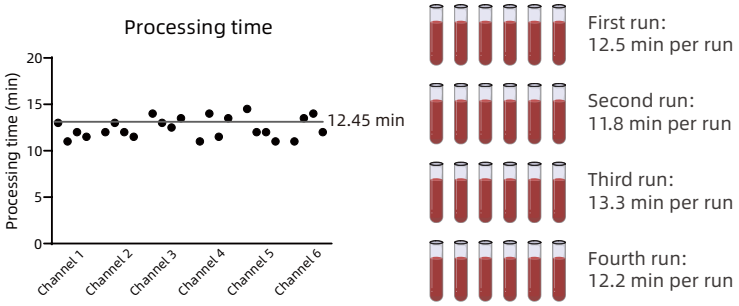
High Throughput

- Fastest single-run isolation within 15 min
- Maximum throughput of 24 tests/h



10 mL urine samples(60 mL/h)

Y. Chen, *et al., Nature Methods.* 2021.



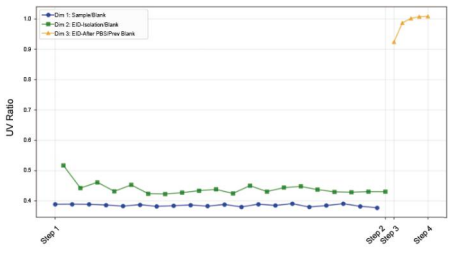
500 μL plasma EVs isolation processing time
(total runtime 49.8 min ;24 tests/h)

Isolation by EXODUS M-600

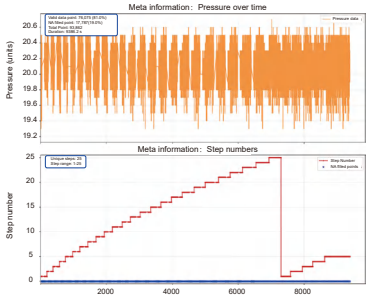
*The above results were obtained via a fast procedure, with purification time varying based on sample characteristics, volume, and procedure.

AI-Assisted Process Development

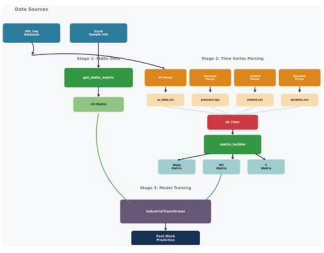
- Integrated UV-based protein detection and process tracking
- AI-driven dynamic adjustment of key parameters



Real-time multi-point UV monitoring of protein concentration



Real-time negative-pressure monitoring and dynamic extraction-time profiling



Simplified workflow diagram of the EXODUS AI decision model

SPECIFICATIONS >>

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EXODUS M-600 SPECIFICATION

Isolation Principles	Combination of the negative pressure oscillations (NPO) and double coupled harmonic oscillations (HO) on nanoporous membrane
Sample Types	Plasma, urine, saliva, cerebrospinal fluid, tears, aqueous humor, synovial fluid, tissue, cell culture medium, bacterial culture medium, cell-derived vesicle, plant, etc.
Number of Channels	6
Isolation Device Size	S/M/L
Sample Volumes	10 μL-1.5 L
Processing Speed	Max processing speed 1.2 L/h
Ultraviolet Sterilization	Internal UV lamp, turn off automatically after 30 min
Temperature Control	Sample position, buffer position, and exosome recovery station, with controlled temperature range of 2-8℃
Display Screen	Features a 11.6-inch TFT touch screen that provides real-time updates on temperature, pressure, processing time, and operating station operation without the need of an additional computer
System Interface	1 power port, 2 USB ports, and 1 network port
Dimensions	510 × 1280 × 480 mm(H × W × D)
Net Weight	120 kg (264.5 lbs)
Operating Environment	Voltage: AC110 V-240 V, 50/60 Hz Operating Temperature: 10-30℃ Operating Humidity: 30-85%, non-condensing

EXODUS

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