EXODUS

EXODUS-T

LARGE-SCALE EXOSOME
ISOLATION SYSTEM FOR THERAPEUTICS

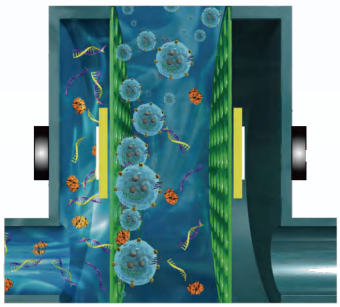
EXODUS-T

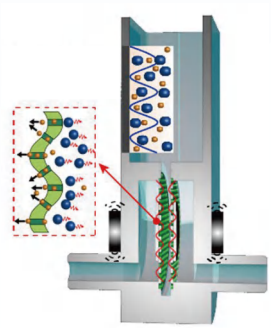
Large-scale exosome isolation system for therapeutics

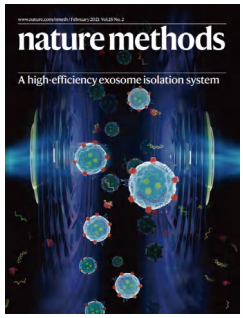
EXODUS-T is an automatic large-scale exosome isolation system that integrates sample pre-processing, isolation, and automatic recovery. It provides users in the fields of exosome drug delivery, treatment, and regenerative medicine with automated and GMP-grade exosome production solutions.

EXODUS isolation principle

A negative pressure oscillation system (NPO) combined with a double-coupled harmonic oscillation system (HO) acts on the nanofiltration device to rapidly remove impurities, such as free nucleic acids and proteins in the sample, to obtain ultra-pure exosomes.







EXODUS-T technological advantages

Large-scale purification

Processing 10 L of samples at a time, with a concentration factor of more than 100 times and a processing speed of up to 2 L/h.

Three-in-one

Three functions are integrated into one instrument: sample pre-processing, isolation, and automatic recovery, all featuring simple and user-friendly operations.

Outstanding purity and yield

Protein removal efficiency >99%, with a particle-to-protein ratio of up to 1×10^{9} particles/μg protein; exosome concentration $>1\times10^{11\text{-}12}$ particles/mL.

Stable and controllable

Fully automatic process flow that ensures batch-to-batch stability, full-process status monitoring, and intelligent handling.

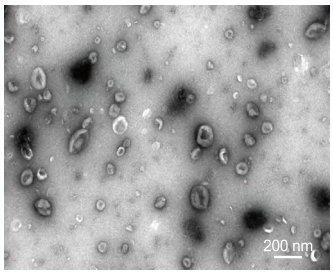
Safe and compliant

Using single-use, fully enclosed consumables which meet pharmacopeial standards, *i.e.*, sterile and their endotoxin is within limits. The system and software comply with GMP and 21 CFR part 11 requirements, respectively.

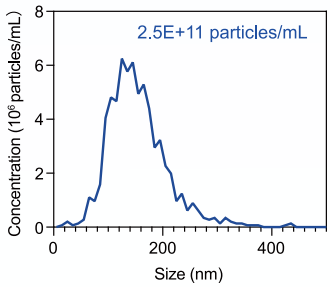
EXODUS-T large-scale isolation results
(Umbilical cord MSCs culture medium)

Exosome characterization

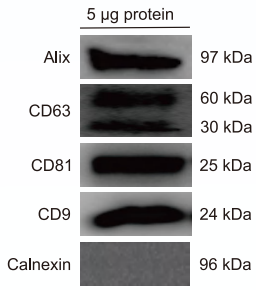
Typical cup-shaped morphology



Size distribution: 30-220 nm

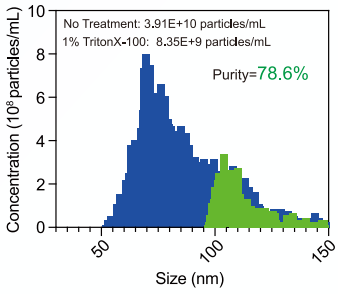


Exosomal protein identification

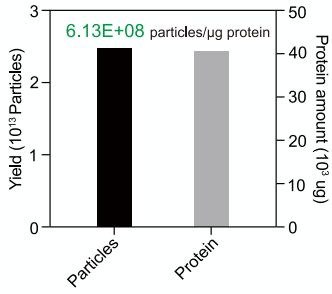


Performance demonstration of high-purity exosomes

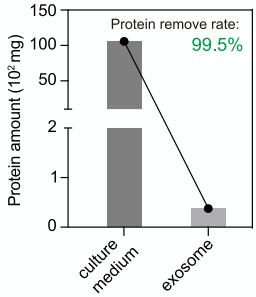
Vesicle percentage: 78.6%
(TritonX-100)



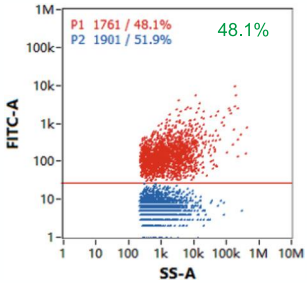
Particle-to-protein ratio
(Particles/μg protein)



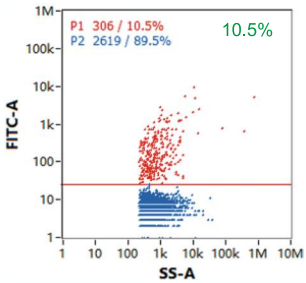
Protein removal rate: 99.5%



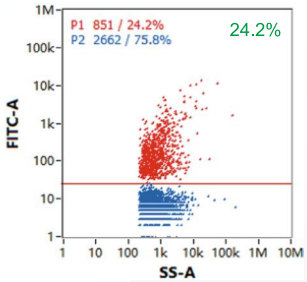
CD81 positive rate: 48.1%



CD63 positive rate: 10.5%



CD9 positive rate: 24.2%



EXODUS-T technical specifications

Sample types	Cell culture medium, bacteria culture medium, milk
Processing volume	1-10 L
Processing speed	1-2 L/h
Concentration factor	100-250 times
Recovery volume	<100 mL
Dimensions (W×D×H)	800×493×685 mm
Net weight	≤70 kg
System interfaces	1 power port, 4 usb ports, and 1 network port
Operating temperature	10-30°C
Relative humidity	30-85%, non-condensing
Voltage	110-220 V
Frequency	50 Hz/60 Hz
Consumables	Exosome isolation device, cleaning solution

JLSS

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