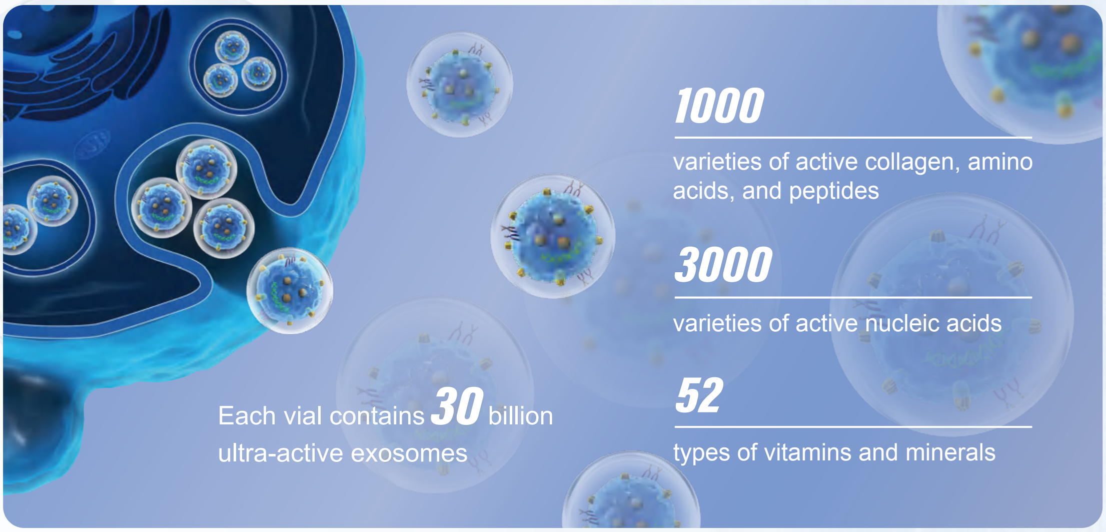
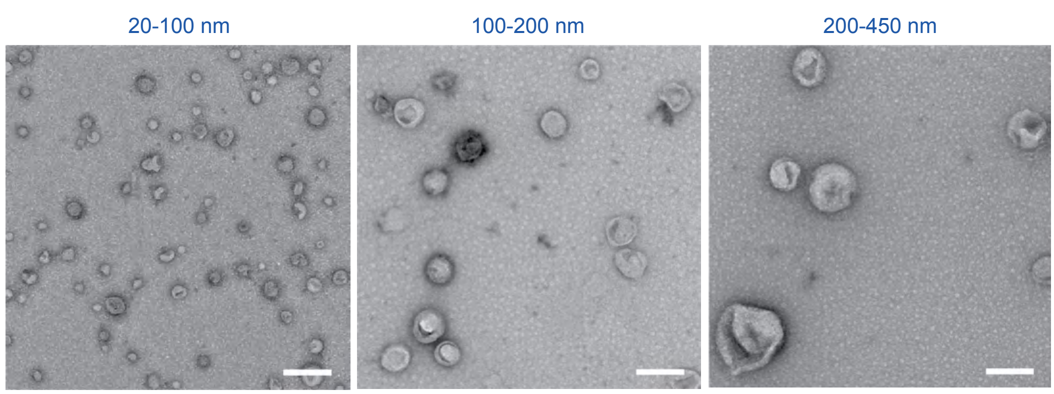
01 | Product Introduction

EXODUS® Ultra-Active Exosomes

Precise categorization, revolutionary advancements

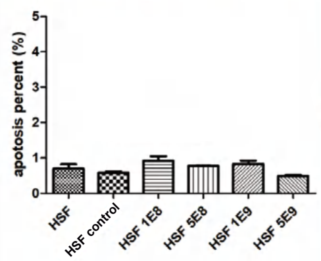
EXODUS® Ultra-Active Exosomes for medical and anti-aging purposes have been isolated using EXODUS®, an automatic label-free isolation system, which outperforms other isolation techniques in speed, purity and yield. During the isolation process, the membrane structure of the exosome is well-protected. Isolated extracellular vesicles are highly concentrated, highly active, highly pure and are classified into three subtypes based on their diameters (*i.e.,* 30 to 100 nm, 100 to 200 nm, and 200 to 450 nm).



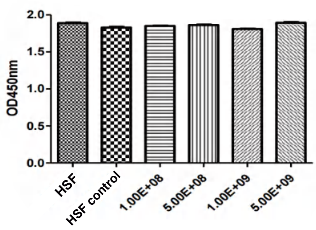


Multi-dimensional detection & safety assurance

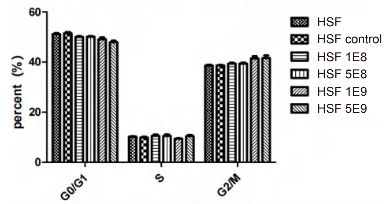
Undergoing rigorous multi-dimensional testing, including biological safety assessment and common pathogenic microorganisms QC testing, our exosomes do not disrupt the normal cell growth process or impact apoptosis levels, which makes them a safe and reliable tool for various applications, including medical aesthetics, skincare, and scientific research.



Effects of exosomes
on apoptosis of HSF cells



Effects of exosomes
on HSF cell proliferation



Effects of exosomes
on HSF cell cycle

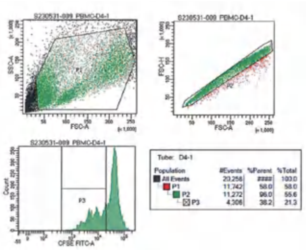
The data show that EXODUS® Ultra-Active Exosomes have no adverse effects on human dermal fibroblasts, including cell proliferation, cell cycle regulation, and apoptosis.

Exceptional biocompatibility & assured activity

EXODUS® Ultra-Active Exosomes have been thoroughly evaluated for their bioactivity and exceptional biocompatibility. They exhibit substantial biological activity, making them well-suited for addressing diverse skin issues, including anti-aging, skin brightening, revitalization, and soothing, offering intelligent and highly effective solutions for skin care.

Lymphocyte inhibition experiment by mesenchymal stem cell exosomes

PHA stimulated, CFSE labeled co-culture group ($5*10^8$)



Application no.	MW230531-008	Sample name	MSCEV
Sample type	/	Batch no.	20230530EV
No. of samples	$1.3*10^{11}$	Receipt date	2023.05.31

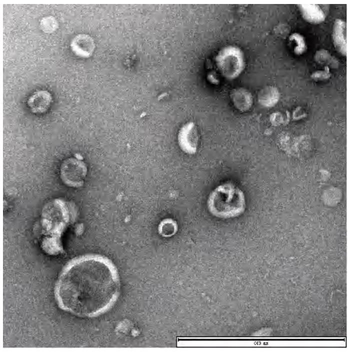
Test items	Criteria	Test Results
【Detection of lymphocyte proliferation inhibition rate】	Flow cytometry	$1*10^{10}$: 24.0% $1*10^9$: 12.8% $8*10^8$: 8.3% $5*10^8$: 7.0%

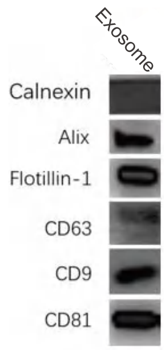
It shows that EXODUS® Ultra-Active Exosomes can inhibit lymphocyte proliferation, affirming their robust biological activity.

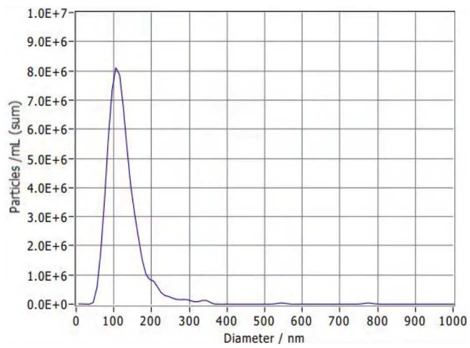
02 Product Advantages

Ultra-high purity & powerful efficacy

Our EXODUS® exosome isolation technology, a breakthrough product, provides 30 billion Ultra-Active Exosomes per vial. We have set the industry standard for exosome content, with higher purity and a particle-to-protein ratio starting at 5.0E+8 (compared to the International Society of Extracellular Vesicle's standard of 1.0E+8). Our removal efficiency for unwanted proteins exceeds 99%, resulting in unmatched potency.







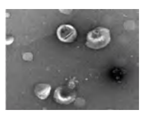
Dual-enveloped & double preservation

The cutting-edge dual freeze-drying system preserves inner and outer membranes, conserving various bioactive substances inside the vesicles, including proteins, lipids, and nucleic acids. Even after freeze-drying and reconstitution, the exosomes retain their structural integrity, preserving maximum activity.

Comparison of NTA and total protein before and after lyophilization

Total protein (Qubit)	Before lyophilization	52.6 ug/ml	
	After lyophilization	49.8 ug/ml	
Particle concentration, particle size (NTA)	Before lyophilization NTA	Particle concentration 1.10E+10	Mean particle size 153 nm
	After lyophilization NTA	Particle concentration 1.20E+10	Mean particle size 168 nm
	NTA change	Particle concentration 9.09%	Mean particle size 9.80%

Transmission electron microscope (TEM) comparison of sterile exosomes before and after lyophilization

	600 nm	200 nm
Before lyophilization TEM		
After lyophilization TEM		

04 Product Information

Raw material types	Extracellular vesicles			Ultra-pure medical exosomes	Highly-pure exosomes	Functional exosomes
Exosome size ranges	200-450 nm	100-200 nm	20-100 nm	30-200 nm	30-200 nm	30-200 nm
Exosome purity (measured by group standard 1.0e+8)	＞1.0E+8	＞3.0E+8	＞5.0E+8	＞5.0E+8	＞2.0E+8	＞3.0E+8
Product grades	Customizable products with Specialized services			Medical-grade or research-grade	Research-grade or medical aesthetics-grade	Medical aesthetics -grade or cosmetics-grade
Exosome quantity options*	5 billion per vial, 10 billion per vial, 30 billion per vial, customizable quantities					
Exosome protein concentration	≥100 μg					
Endotoxin testing	≤0.5 EU/ml					
TEM	Provided					
NTA report	Provided					
Testing for bacteria, fungi, and mycoplasma	No contaminants					
Visible insoluble particles	No visible particles					
Form options	Available in freeze-dried or pure liquid phase					

*Note: Exosome specifications and particle numbers can be customized according to customer needs, ranging from 5 billion to 25 trillion per vial, with a concentration of 500 billion per milliliter.

EXODUS

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