Collagen Broccoli Exosome

Meteoric Cosmeceutiicals
Beauty Meets Brilliance in Biotech

BIOTECH EDGE

Collagen Broccoli Exosome merges plant-derived exosomal biotechnology with bioactive collagen for targeted rejuvenation. These nano-vesicles, **engineered through advanced DDDS digital loading,** deliver collagen with exceptional precision, enhancing cellular renewal, reducing inflammation, and strengthening the skin's structural matrix. **Designed for deep dermal communication** and high biological compatibility, this exosome-based system supports firmer, smoother, and more resilient skin with visible luminosity and long-term restoration.

PRODUCT DETAILS

INCI Name:	Exosome Particles:	Appearance:
Brassica Oleracea Italica Vesicles, Collagen	**10 mg Marine Collagen loaded per 1×10^{7} exosomes (Purity - 95%)**	**Transparent colourless liquid**

APPLICATIONS :

- Anti-aging skincare
- Firming and lifting products
- Skin regeneration and repair
- Replenishing Lotion
- Brightening and even tone care
- Post procedure recovery care

KEY FEATURES :

- High-efficiency collagen delivery using DDDS digital loading
- Enhances dermal fibroblast vitality and collagen synthesis
- Supports lifting and firming effects
- Strengthens skin barrier and reduces inflammation
- Provides antioxidant protection and brightening benefits
- Designed for high transdermal absorption and skin compatibility

WHAT IT BRINGS TO YOUR FORMULATION :

- A next-gen exosome carrier system for intelligent collagen transport
- Superior cellular uptake for measurable anti-aging performance
- Multi-pathway rejuvenation including firming, wrinkle reduction, and regeneration
- Advance Biotech delivery system suitable for premium skincare lines

Please turn for more

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Principle Of Drug Loading Technology In Exosome By DDDS (Digital Drug Delivery System)

Broccoli Exosome Treated By DDDS

Collagen by DDDS

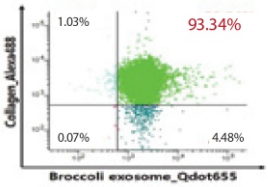
Loading into phospholipid bilayer of Exosome

Temporary Pore Formation In Phospholipid Bilayer Of Broccoli Exosome By DDDS

Cavitation Formation Around Collagen

Collagen loading into Broccoli exosomes

How To Verify Collagen-Loaded Broccoli Exosome?



FACS analysis (Fluorescence-Activated Cell Sorting)

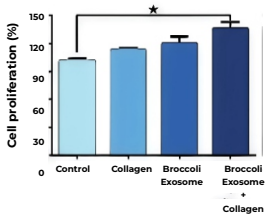
Loading efficiency of 93.34% of Collagen loaded into Broccoli Exosome

EFFICACY STUDIES :

InVitro Efficacy (Human Dermal Fibroblasts)

Cell Regeneration

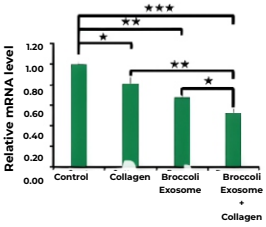
Increase of 40%



Proliferation gene related to collagen

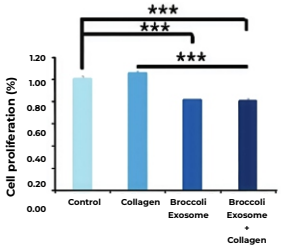
Protein tyrosine kinase 2 beta (PTK2B)

Decrease of 50%



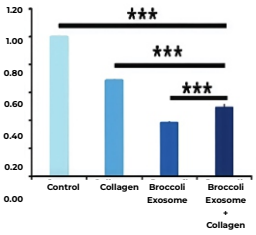
Decrease of 20%

Regeneration: TNF-a



Decrease of 55%

Aging : Cyclin D1

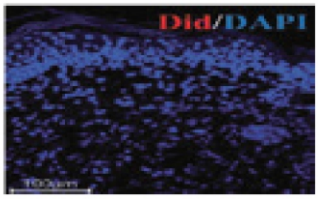


*Statistical analysis with one-way ANOVA, *p<0.05, **p<0.01, ***p<0.001*

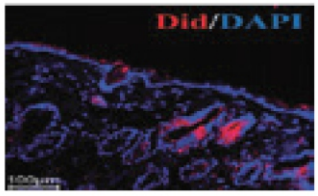
Control: Human Dermal Fibroblast with null treatment

Skin Penetration of HA Broccoli Exosome

Before Treatment



1 min After Treatment



Penetration of Collagen Exosome through (3 mm) skin tissue after topically applied on skin (Collagen Exosomes are stained in red by DiD)

CLINICALLY PROVEN BENEFITS :

- Improves collagen synthesis and dermal density
- Visibly reduces wrinkles and signs of aging
- Enhances firmness and lifting effect
- Supports faster skin regeneration and recovery
- Strengthens barrier and reduces inflammatory response
- Promotes clearer, brighter, more even-toned skin

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