



# PNExo™ Exosome-Ascophyllum nodosum

Catalog: PNE-AAN15

PNExo™ Exosome Series (Exosomes isolated from Algae) are nanosized (30-150 nm) membrane vesicles extracted from Algae, rich in bioactive molecules and proteins, including Rhodophyta, Phaeophyceae, Chlorophyta, and Cyanophyta. These naturally derived nanoparticles contain a variety of bioactive molecules and proteins, which have been proven to offer numerous benefits in skincare, drug delivery, and biomedicine. Algae exosomes, with their antioxidant, anti-inflammatory, and anti-aging properties, have become an attractive option for the development of innovative therapies. Natural substances derived from algae are widely used as cosmetic ingredients because they provide benefits to human skin, such as anti-aging, moisturizing, whitening, regeneration, and nutritional supply. Moreover, they have the potential to deliver therapeutic compounds to target cells, which could revolutionize drug administration methods. Overall, algae-derived exosomes hold significant promise for a broad spectrum of applications in the fields of medicine and biotechnology. PNExo™ is dedicated to the production and delivery of high-quality algae-derived exosome products. PNExo™ products undergo a rigorous screening and purification process to ensure their high purity and activity. We can provide both lyophilized powder or frozen liquid according to customer requirements. lyophilized powder is beneficial for long-term storage at 4°C, while frozen liquid should be maintained at temperatures between -20°C and -80°C. Ultracentrifugation and PEG precipitation have been maturely applied to exosome isolation, and we also possess TFF technology, mainly used for large-scale separation and production of exosomes. Creative Biostructure PNExo™ exosome products guarantee higher purity and quality, and we can provide exosome GMP production and CDMO services to meet our customers' research and production needs.

## PRODUCT INFORMATION

|                       |                                    |
|-----------------------|------------------------------------|
| <b>Product Name</b>   | PNExo™ Exosome-Ascophyllum nodosum |
| <b>Catalog Number</b> | PNE-AAN15                          |



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| <b>Source</b>           | Ascophyllum nodosum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Product Overview</b> | <p>PNExo™ Exosome Series (Exosomes isolated from Algae) are nanosized (30-150 nm) membrane vesicles extracted from Algae, rich in bioactive molecules and proteins, including Rhodophyta, Phaeophyceae, Chlorophyta, and Cyanophyta. These naturally derived nanoparticles contain a variety of bioactive molecules and proteins, which have been proven to offer numerous benefits in skincare, drug delivery, and biomedicine. Algae exosomes, with their antioxidant, anti-inflammatory, and anti-aging properties, have become an attractive option for the development of innovative therapies. Natural substances derived from algae are widely used as cosmetic ingredients because they provide benefits to human skin, such as anti-aging, moisturizing, whitening, regeneration, and nutritional supply. Moreover, they have the potential to deliver therapeutic compounds to target cells, which could revolutionize drug administration methods. Overall, algae-derived exosomes hold significant promise for a broad spectrum of applications in the fields of medicine and biotechnology. PNExo™ is dedicated to the production and delivery of high-quality algae-derived exosome products.</p> <p>PNExo™ products undergo a rigorous screening and purification process to ensure their high purity and activity. We can provide both lyophilized powder or frozen liquid according to customer requirements. Lyophilized powder is beneficial for long-term storage at 4°C, while frozen liquid should be maintained at temperatures between -20°C and -80°C. Ultracentrifugation and PEG precipitation have been maturely applied to exosome isolation, and we also possess TFF technology, mainly used for large-scale separation and production of exosomes. Creative Biostructure PNExo™ exosome products guarantee higher purity and quality, and we can provide exosome GMP production and CDMO services to meet our customers' research and production needs.</p> |
| <b>Form</b>             | Lyophilized powder / Frozen Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Concentration</b>    | > 1x10 <sup>6</sup> particles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Storage</b>          | Lyophilized powder store at 4 °C. Frozen liquid store at -20°C to -80°C. Recommended to avoid repeated freeze-and-thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



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| <b>Reconstitution</b> | Reconstitute lyophilized exosome by adding deionized water for a desired final concentration. Centrifuge before opening to ensure exosomes are at bottom, resuspend exosomes by pipetting and/or vortex, please avoid bubbles. Centrifuge again and mix well for using. |
| <b>Efficacy</b>       | Anti-inflammatory, Antioxidant, Skin rejuvenation                                                                                                                                                                                                                       |

## USAGE GUIDELINES

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|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Handling</b> | Avoid excessive mixing or vortexing to prevent aggregation. Long-term storage above -80°C may result in aggregate formation. Thaw on ice before use. |
| <b>Storage</b>          | <b>Short term:</b> +2°C to +8°C (up to 1 week)<br><b>Long term:</b> -80°C (stable for 12 months)                                                     |
| <b>Stability</b>        | Stable for 12 months at -80°C. Avoid repeated freeze-thaw cycles.                                                                                    |
| <b>Freeze / Thaw</b>    | Can be frozen, but limit to 3 freeze/thaw cycles to maintain particle integrity.                                                                     |

**Important:** This product is for **research use only**. Not intended for diagnostic or therapeutic applications. Please refer to the Safety Data Sheet (SDS) for complete handling and safety information.