



# PNExo™ Exosome-Grapefruits

Catalog: PNE-FG11

Plant exosomes are nanosized (30-150 nm) membrane vesicles that contain biomolecules. Plant-derived exosomes refer to naturally occurring nanoparticles derived from plants that contain bioactive molecules and proteins. These exosomes have been shown to have multiple benefits in a variety of applications, such as skincare, drug delivery, and biomedicine. Plant-derived exosomes have been found to possess antioxidant, anti-inflammatory, and anti-aging properties, making them an attractive option for the development of new and innovative therapies. Plant-derived natural substances are widely used as cosmeceutical materials because they exert beneficial effects on the human skin, such as antiaging, moisturizing, whitening, regeneration, and nutritional supply. Besides, they could delivery therapeutic compounds to target cells, potentially revolutionizing the way in which drugs are administered. Overall, plant-derived exosomes hold great promise for a wide range of applications in the fields of medicine and biotechnology. PNExo™ is focused on the production and delivery of high quality plant-derived exosomes products. Exosomes are important tools of intercellular communication with a variety of biological functions, including cell regeneration and immune regulation. PNExo™ products undergo a rigorous screening and purification process that guarantees their high purity and activity. Lyophilization is useful for a long-term storage at 4°C, and frozen liquid should be kept at -20°C to -80°C. Ultracentrifugation and precipitation techniques are mainly used in exosome Isolation. It had been reported that both methods yielded extracellular vesicles in the size range of exosomes and included apoproteins, which can be used in downstream analyses. Creative Biostructure PNExo™ exosome products guarantee higher purity and quality to meet our customer research.

## PRODUCT INFORMATION

|                       |                                  |
|-----------------------|----------------------------------|
| <b>Product Name</b>   | PNExo™ Exosome-Grapefruits       |
| <b>Catalog Number</b> | PNE-FG11                         |
| <b>Source</b>         | Exosome derived from Grapefruits |



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| <b>Product Overview</b> | <p>Plant exosomes are nanosized (30-150 nm) membrane vesicles that contain biomolecules. Plant-derived exosomes refer to naturally occurring nanoparticles derived from plants that contain bioactive molecules and proteins. These exosomes have been shown to have multiple benefits in a variety of applications, such as skincare, drug delivery, and biomedicine. Plant-derived exosomes have been found to possess antioxidant, anti-inflammatory, and anti-aging properties, making them an attractive option for the development of new and innovative therapies. Plant-derived natural substances are widely used as cosmeceutical materials because they exert beneficial effects on the human skin, such as antiaging, moisturizing, whitening, regeneration, and nutritional supply. Besides, they could delivery therapeutic compounds to target cells, potentially revolutionizing the way in which drugs are administered. Overall, plant-derived exosomes hold great promise for a wide range of applications in the fields of medicine and biotechnology. PNExo™ is focused on the production and delivery of high quality plant-derived exosomes products. Exosomes are important tools of intercellular communication with a variety of biological functions, including cell regeneration and immune regulation. PNExo™ products undergo a rigorous screening and purification process that guarantees their high purity and activity. Lyophilization is useful for a long-term storage at 4°C, and frozen liquid should be kept at -20°C to -80°C. Ultracentrifugation and precipitation techniques are mainly used in exosome Isolation. It had been reported that both methods yielded extracellular vesicles in the size range of exosomes and included apoproteins, which can be used in downstream analyses. Creative Biostructure PNExo™ exosome products guarantee higher purity and quality to meet our customer research.</p> |
| <b>Form</b>             | Lyophilized powder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Concentration</b>    | > 1x10 <sup>10</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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |


**Reconstitution**

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.

## USAGE GUIDELINES

|                         |                                                                                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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.