

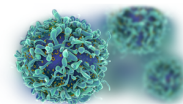
# Human MSP1E3D1 lyophilized protein with a his-tag

Catalog: MSP-1003

Recombinant human membrane scaffold protein 1E3D1 was expressed in E.coli and purified by Ni-NTA.

## PRODUCT INFORMATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Name</b>     | Human MSP1E3D1 lyophilized protein with a his-tag                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Catalog Number</b>   | MSP-1003                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Product Overview</b> | Recombinant human membrane scaffold protein 1E3D1 was expressed in E.coli and purified by Ni-NTA.                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Purity</b>           | >90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Tag</b>              | His                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Molecular Mass</b>   | 32.6kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Storage</b>          | Stored lyophilized powder at -20°C. The reconstituted solution should be stored at 2-8°C and should be used up in several days.                                                                                                                                                                                                                                                                                                                                                      |
| <b>Background</b>       | Nanodiscs are a new class of model membranes that are being used to solubilize and study a range of integral membrane proteins and membrane-associated proteins. The Nanodisc bilayer is bounded by a membrane scaffold protein coat that confers enhanced stability and a narrow particle size distribution. The nanodisc assembles from a mixture of full length membrane protein in detergent, phospholipid micelles and membrane scaffold protein upon removal of the detergent. |



|                          |                                                                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reconstitution</b>    | Adding double distilled water to prepare a stock solution of 4mg/mL. This stock solution can be diluted further as required by the different application protocols. |
| <b>Scaffold Diameter</b> | 12-14 nm                                                                                                                                                            |
| <b>Formulation</b>       | Lyophilized from 20mM Tris pH 7.4, 100 mM NaCl, 0.5 mM EDTA.                                                                                                        |

## 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.