MSP1E3D1-His “Dark”, human

Cat. No.: 26352

Description	MSP1E3D1-His “Dark” is a His-tagged membrane scaffold protein (MSP) derived from apolipoprotein A-I that wraps around a phospholipid bilayer patch to form stable, water-soluble nanodiscs of 12–14 nm in diameter, enabling the stabilization of membrane proteins in a defined lipid environment. Its defining feature is the replacement of all tryptophan residues with phenylalanines, resulting in a significantly reduced intrinsic fluorescence and UV absorbance at 280 nm, making accurate concentration determination of MSP-stabilized membrane proteins easier than ever. This product contains a His-tag, keep that in mind when choosing the affinity tag for your membrane protein.
Form	Lyophilized
Amount	2 mg
Available origins	Human
Purity	> 90% (Determined by SDS-PAGE)
Number of amino acids	277
Molecular mass	32.48 kDa
Extinction coefficient (in H_2O) ε_{280}	Ext. coefficient 13410 Abs 0.1% (=1 g/l) 0.413
Buffer	20 mM TRIS pH 7.4, 100 mM NaCl, 0.5 mM EDTA
Affinity tag	His tag
Sequence	GHHHHHHH DYDIPTT ENLYFQG STFSKLREQLG PVTQEFFDNLEKETEGLRQEMS KDLEEVKAKVQ PYLDDFQKKFQEEMELYRQKVE PLRAELQEGARQKLHELQEKLS PLGEEMRDRARAHVDALRTHLA PYLDDFQKKFQEEMELYRQKVE PLRAELQEGARQKLHELQEKLS PLGEEMRDRARAHVDALRTHLA PYSDELRQRLAARLEALKENGG ARLAEYHAKATEHLSTLSEKAK PALEDLRQGLL PVLESFKVSFLSALEEYTKKLNTQ
Stability & Storage	Lyophilized protein: stable at -20°C for 24 months. Reconstituted protein: stable at 2-8°C for several days.
Shipping	Room temperature

Hazards	Product is not classified as hazardous according to (EC) No 1272/2008 [CLP]. A Material Safety Data Sheet is provided.
Application	MSP1E3D1-His "Dark" enables reliable UV-Vis based concentration determination and reduces background interference in fluorescence-based assays and label-free detection methods, offering a clear advantage over standard MSPs and alternative solubilization agents such as AASTY or SMA. It is further suited for Cryo-EM, ELISA, protein-protein interaction studies, and cell-free expression systems, supporting a broad range of biomedical, proteomic, and protein biochemistry applications.
Recommended usage	
Manufacturer	Cube Biotech

For research use only