

MSP1D1 “Ultra Dark”, human

Cat. No.: 26432

Description	MSP1D1 “Ultra Dark” is a membrane scaffold protein (MSP) derived from apolipoprotein A-I that wraps around a phospholipid bilayer patch to form stable, water-soluble nanodiscs, enabling the stabilization of membrane proteins in a defined lipid environment. Its defining feature is the addition of three tryptophan residues in sequence, resulting in a significantly increased intrinsic fluorescence of the scaffold protein itself.
Form	Lyophilized
Amount	2 mg
Available origins	Human
Purity	> 90% (Determined by SDS-PAGE)
Number of amino acids	201
Molecular mass	23.1 kDa
Extinction coefficient (in H₂O) ϵ_{280}	Ext. coefficient -- Abs 0.1% (=1 g/l) --
Buffer	20 mM TRIS pH 7.4, 100 mM NaCl, 0.5 mM EDTA
Affinity tag	No tag
Sequence	G LKLLDNFDSVTSTFSKLREQL G PVTQEFFDNLEKETEGLRQEMS KDLEEVKAKVQ PFLDDFQKKFQEEMELFRQKVE PLRAELQEGARQKLHELQEKLS PLGEEMRDRARAHVDALRTHLA PFSDELRLQRLAARLEALKENGG ARLAEFHAKATEHLSTLSEKAK PALEDLRQGILL PVLESFKVSFLSALEEFTKLNTQ
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	

Recommended usage	The reduced UV absorption at 280 nm makes MSP1D1 "Ultra Dark" particularly advantageous over standard MSPs and alternative solubilization agents such as AASTY or SMA, enabling reliable UV-Vis based concentration determination and significantly reduced background interference in fluorescence-based assays and label-free detection methods. Beyond its spectroscopic advantages, MSP1D1 "Ultra Dark" is well suited for Cryo-EM, ELISA, and protein-protein interaction studies where unrestricted ligand access is required, and is further compatible with cell-free expression systems and a broad range of biomedical, proteomic, and protein biochemistry applications.
Manufacturer	Cube Biotech

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