MSP Starter Kit for In Vitro Protein Synthesis

Cat. No.: 26712

Description	The MSP Starter Kit for In Vitro Protein Synthesis is ready to use for cell-free protein synthesis: it contains 8 different pre-assembled MSP-nanodiscs, which can be added directly to the expression reaction so the membrane protein inserts co-translationally into a membrane with predefined lipid composition, no detergents or post-synthesis reconstitution needed. This selection of MSP pre-assembled nanodiscs is particularly well suited for GPCRs. Two scaffold sizes (MSP1D1, MSP1E3D1) × four lipid compositions (DOPG; DOPG/Cardiolipin; POPC/POPS; POPC/POPS/Cholesterol) allow quick identification of the best-performing condition, manually or on a liquid handler. Matching Scale-up vials carry the winning condition forward to µg-to-mg quantities of purified, functional membrane protein.
Form	pre-assembled MSP nanodisc
Amount	8 x 7.5 µL (500 µM)
Available origins	Human
Purity	> 90% (Determined by SDS-PAGE)
Number of amino acids	MSP1D1: 201 MSP1E3D1: 256
Molecular mass	MSP1D1: 23.33 kDa MSP1E3D1: 29.98 kDa
Extinction coefficient (in H_2O) ε_{280}	MSP1D1: 25,440 M-1cm-1 MSP1E3D1: 26,930 M-1cm-1
Buffer	20 mM TRIS pH 7.4; 100 mM NaCl; 0.5 mM EDTA
Affinity tag	none
Stability & Storage	-80°C for 18 months Avoid repeated freeze-thaw cycles
Shipping	Dry ice
Hazards	Product is not classified as hazardous according to (EC) No 1272/2008 [CLP]. A Material Safety Data Sheet is provided.

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Application	Primarily used in cell-free (in vitro) synthesis to screen and identify the best-performing nanodisc condition for a given GPCR. Without an affinity tag, the reconstituted receptor is suited for native, label-free downstream applications, supporting structural studies (e.g. cryo-EM), ligand-binding and functional assays, and early-stage drug discovery screening.
Recommended usage	In Vitro Protein Synthesis 5-75 µM (0.5-7.5 µL)
Manufacturer	Cube Biotech

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