Biotinylated Human MSP1D1 Protein, His,Avitag™ (Nanodisc)

Catalog # APO-H81Q5

Synonym

MSP1D1

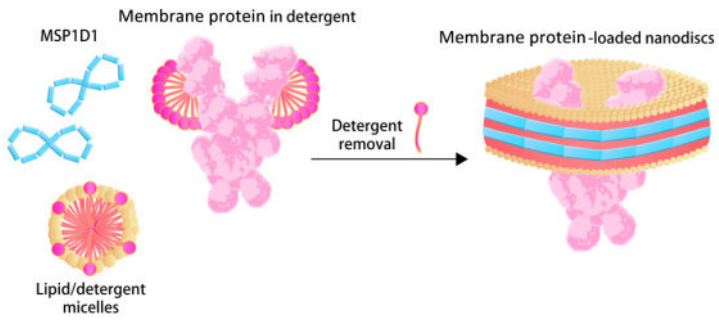
Source

Biotinylated Human MSP1D1 Protein, His,Avitag is expressed from E. coli cells. It contains AA Ser 1- Gln 211.
Predicted N-terminus: Met

Molecular Characterization

This protein carries a polyhistidine tag at the N-terminusa, followed by an Avi tag (Avitag™). The protein has a calculated MW of 29.4 kDa. The protein migrates as 28 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE). This protein is used together with nanodisc protein as isotype control.

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 (MSP1D1) 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(MSP1D1) upon removal of the detergent.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Supplied as 0.2 μm filtered solution in 20 mM HEPES, 150 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped with dry ice, please inquire the shipping cost.

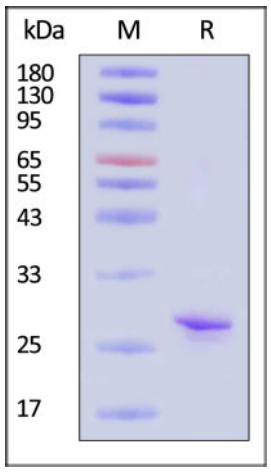
Storage

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

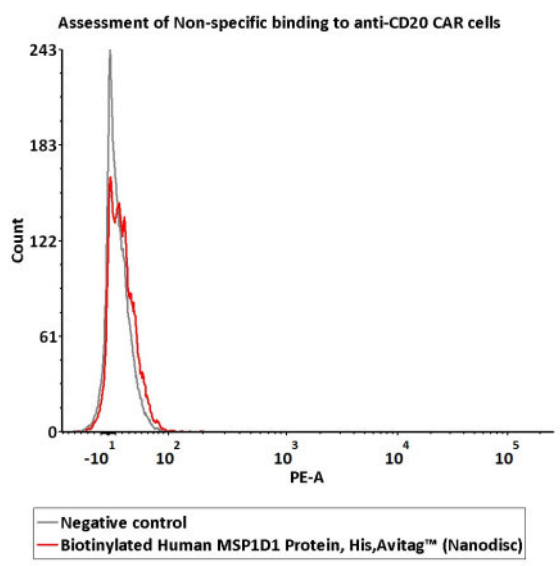
- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

SDS-PAGE



Biotinylated Human MSP1D1 Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity-FACS



2e5 of CD20-CAR-293 cells transfected with anti-CD20-scFv were stained with 100 μL of 10 μg/mL of Biotinylated Human MSP1D1 Protein, His,Avitag (Cat. No. APO-H81Q5), washed and then followed by PE-SA and analyzed with FACS. PE-SA was used as negative control (QC tested).

Background

Membrane scaffold proteins (MSPs) are synthetic derivatives of apolipoprotein A-I, a major protein component of human high-density lipoprotein complexes. Membrane scaffold protein 1D1 (MSP1D1) is the most common one among the MSPs variants. MSP1D1 is a synthetic derivate of apolipoprotein A-I, which is the major protein element of human high-density lipoproteins. The amphipathic, synthetic protein has the ability to self-assemble in the presence of synthetic phospholipids into discoidal nanoparticles, so called nanodiscs.

Clinical and Translational Updates