

**Synonym**

MSP1D1

**Source**

Biotinylated Human MSP1D1 Protein, His,Avitag is expressed from E.coli cells.

It contains AA Ser 1- Gln 211.

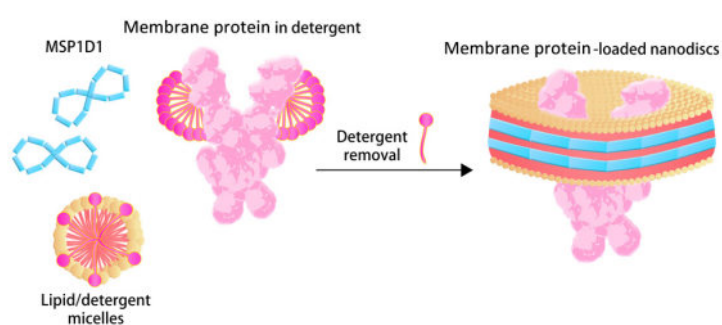
Predicted N-terminus: Met

**Molecular Characterization**

This protein carries a polyhistidine tag at the N-terminus, followed by an Avi tag (Avitag™). The protein has a calculated MW of 29.4 kDa. The protein migrates as 28 kDa 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 as sterile liquid solution with dry ice, please inquire the shipping cost.*

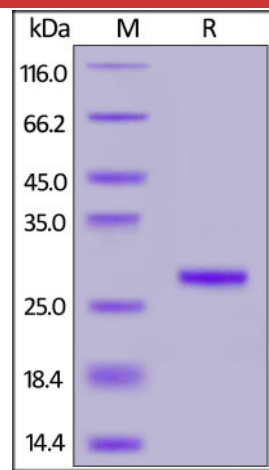
**Storage**

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

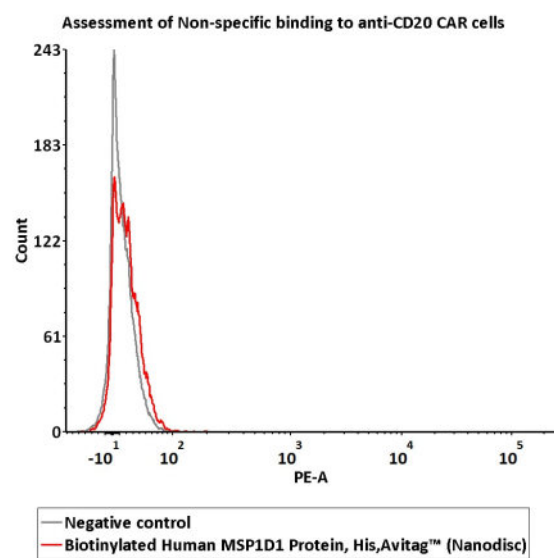
- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

**SDS-PAGE**



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

### Bioactivity-FACS



2e5 of CD20-CAR-293 cells transfected with anti-CD20-scFv were stained with 100  $\mu$ L of 10  $\mu$ g/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 derivative 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

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.