

# Human MSP1D1 Protein, His Tag (Nanodisc)

Catalog # APO-H51H3



BIOSYSTEMS  
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## Synonym

MSP1D1

## Source

Human MSP1D1 Protein, His Tag (APO-H51H3) is expressed from E. coli cells.

It contains AA Gly 1- Gln 211.

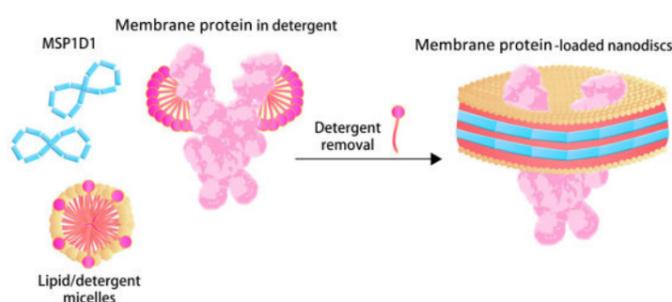
Predicted N-terminus: His

## Molecular Characterization

This protein carries a polyhistidine tag at the N-terminus. The protein has a calculated MW of 24.7 kDa. The protein migrates as 23 kDa and 25 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.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>90% 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.*

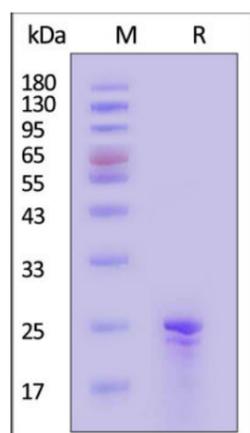
## Storage

*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 12 months under sterile conditions.

## SDS-PAGE



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4/8/2024

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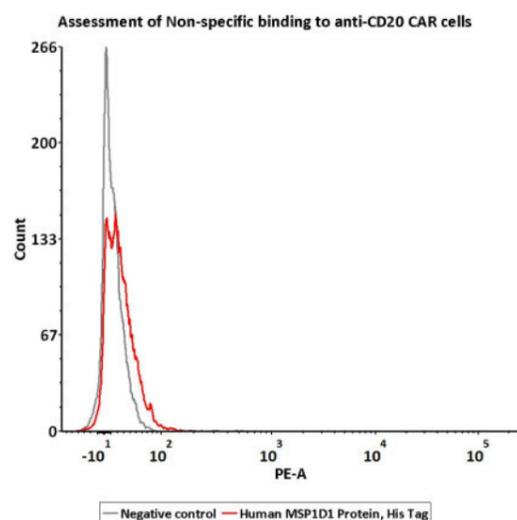
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Human MSP1D1 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

## 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 Human MSP1D1 Protein, His Tag (Cat. No. APO-H51H3), washed and then followed by PE anti-His antibody and analyzed with FACS. PE anti-His antibody 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

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