

# Active Recombinant Human MSLN protein, Fc/Avi-tagged, Biotinylated

Cat. No. MSLN-051H Lot. No. (See product label)

## SPECIFICATION

### Product Overview

Biotinylated Recombinant Human MSLN(Glu296-Gly580) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .

### Species

Human

### Source

CHO

### ProteinLength

Glu296-Gly580

### Description

MSLN, also known as CAK1 and ERC, is derived from a 70 kDa precursor that also includes Megakaryocyte Potentiating Factor (MPF) (1 - 3). The 70 kDa precursor is expressed on the cell surface where it is cleaved at a dibasic proteolytic site to release the 32 kDa glycosylated MPF (3, 4). MPF is a cytokine that potentiates IL-3 induced megakaryocyte colony formation (2, 5). The term Mesothelin refers to the 40 kDa glycosylated protein which remains attached to the cell surface via a GPI linkage. Alternate splicing generates additional Mesothelin isoforms that have either an eight amino acid insertion following Ser408 or a substituted C-terminal region with no GPI anchor (6). This recombinant human Mesothelin lacks the 8 aa insertion, and within aa 296 - 580 it shares 59% sequence identity with mouse and rat Mesothelin. Mesothelin is normally expressed on mesothelial cells in the pleura, pericardium, and peritoneum as well as in the developing and postnatal pancreas (1, 7). It is up-regulated in mesotheliomas and a range of carcinomas and adenomas (8 - 11). Mesothelin promotes tumor

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cell proliferation, migration, anchorage-independent growth, and tumor progression (10, 12). It is coexpressed with the tumor antigen CA125/MUC16 on advanced ovarian adenocarcinomas and interacts with this molecule to support cell adhesion (13). A soluble form of Mesothelin is released from tumor cells into the serum or tissue effusions (11, 14, 15). Our Avi-tag Biotinylated human Mesothelin features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

**Predicted N Terminal**      Glu296

**Form**                                      Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

**Bio-activity**                              The biotin to protein ratio is greater than 0.7 as determined by the HABA assay. Measured by its binding ability in a functional ELISA.

**Molecular Mass**                        70-78 kDa, under reducing conditions

**Endotoxin**                                <0.10 EU per 1 µg of the protein by the LAL method.

**Purity**                                      >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Applications**                            Bioactivity

**Storage**                                    Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after

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reconstitution.

**Reconstitution** Reconstitute at 1 mg/mL in PBS.

**Conjugation** Biotin

## GENE INFORMATION

**Gene Name** MSLN mesothelin [ Homo sapiens ]

**Official Symbol** MSLN

**Synonyms** MSLN; mesothelin; CAK1; MPF; CAK1 antigen; megakaryocyte potentiating factor; soluble MPF mesothelin related protein; pre-pro-megakaryocyte-potentiating factor; SMRP;

**Gene ID** 10232

**mRNA Refseq** NM\_001177355

**Protein Refseq** NP\_001170826

**MIM** 601051

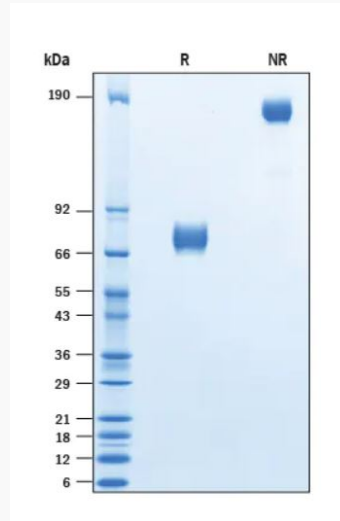
**UniProt ID** Q13421

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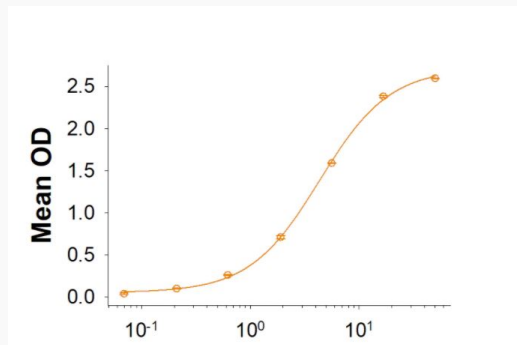
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**SDS-PAGE**



2  $\mu$ g/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie<sup>®</sup> Blue staining.

**Binding Activity**



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