

Active Recombinant Mouse Msln protein, His-tagged

Cat. No. Msln-33M Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Msln(Asp298-Gly582) fused with His tag at C-terminal was expressed in HEK293.
Species	Mouse
Source	HEK293
ProteinLength	Asp298-Gly582
Description	<p>Mesothelin (MSLN) was initially cloned from a library of human pancreatic cancer cells. It was also identified by a monoclonal antibody, MAb K1, which recognized a glycoprotein present on the surface of mesothelial cells. Mouse and human mesothelin are 69% identical. Mouse MSLN gene encodes a ~71 kD precursor protein of 625 amino acids. The C-terminal glycosylphosphatidylinositol (GPI) anchor addition signal is removed and replaced with a GPI anchor. The MSLN precursor is cleaved by furin into two products, a ~31 kD mature megakaryocyte potentiating factor and a ~40 kD GPI-anchored membrane-bound mature mesothelin. The 40 kD GPI-anchored mesothelin can be released by treatment with phosphatidylinositol-specific phospholipase C. Soluble mesothelin specifically binds to ovarian carcinoma cell line OVCAR-3, mediated by the cancer antigen 125 (CA125), a mucin-like glycoprotein on the surface of tumor cells. CA125 and mesothelin are co-expressed in advanced grade ovarian adenocarcinoma, and it has been speculated that CA125 might contribute to the metastasis of ovarian cancer to the peritoneum by initiating cell attachment to the mesothelial epithelium via binding to mesothelin. Also,</p>

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mesothelin and CA125/mucin 16 (CA125/MUC16) are co-overexpressed at the invading edges of pancreatic cancer tissues, and their expression correlates with poor survival rates. Mesothelin expression in the mouse embryo is high on days 7 and 17 of gestation, but absent on day 11 and low on day 15, suggesting developmental regulation. Nevertheless, mesothelin function is not essential for growth or reproduction in mice.

Predicted N Terminal Glu

Form 0.22 µ filtered protein solution is in PBS, pH 7.2.

Bio-activity Human CA125/MUC16 when immobilized at 2 µg/ml is able to bind recombinant Mesothelin in a dose dependent manner with a ED50 of 0.03 - 0.09 µg/ml.

Molecular Mass The 291 amino acid recombinant protein has a predicted molecular mass of approximately 32.9 kD. The DTT-reduced and non-reduced protein migrate at approximately at 50-55 kD by SDS-PAGE.

Endotoxin Less than 0.01 ng per µg cytokine as determined by the LAL method.

Purity >95%, as determined by Coomassie stained SDS-PAGE.

Storage Unopened vial can be stored between 2 centigrade and 8 centigrade for three months, at -20 centigrade for six months, or at -70 centigrade for one year. For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 µg/mL in sterile buffer (PBS, HPBS, DPBS, and EBSS) containing carrier protein such as 1% BSA or HSA. After dilution, the cytokine can be stored between 2 centigrade and 8 centigrade for one month or from -20 centigrade to -70 centigrade for up to 3 months. Avoid repeated freeze/thaw cycles.

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Concentration 10-100 g sizes are bottled at 200 g/mL. 500 g and larger sizes are bottled at the concentration indicated on the vial.

GENE INFORMATION

Gene Name Msln mesothelin [*Mus musculus*]

Official Symbol Msln

Synonyms MSLN; mesothelin; megakaryocyte potentiating factor; pre-pro-megakaryocyte-potentiating factor; MPF;

Gene ID 56047

mRNA Refseq NM_018857

Protein Refseq NP_061345

UniProt ID Q61468

Chromosome Location 17; 17 A3.3

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