

MSLN/Mesothelin Protein, Rat, Recombinant (His)

General Information

Synonyms:	mesothelin
Protein Construction:	Glu296-Ser598
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q13421-3
Molecular Weight:	35.23 kDa (predicted); 45-55 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Human MSLN, His Tag at 2 µg/ml (100 µl/well) on the plate. Dose response curve for Biotinylated Human CA125, His-Avi Tag with the EC50 of 9.4 ng/ml determined by ELISA. (QC Test) Immobilized Human MSLN, His Tag at 0.5 µg/ml (100 µl/well) on the plate. Dose response curve for Anti-MSLN Antibody, hFc Tag with the EC50 of 2.9 ng/ml determined by ELISA.
Purity:	> 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Mesothelin, also known as MSLN, is a protein that in humans is encoded by the MSLN gene. Cloning studies showed that the mesothelin gene encodes a precursor protein that is processed to yield mesothelin which is

attached to the cell membrane by a glycosphosphatidylinositol linkage and a 31-kDa shed fragment named megakaryocyte-potentiating factor (MPF). Although it has been proposed that mesothelin may be involved in cell adhesion, its biological function is not known. A knockout mouse line that lacks mesothelin reproduces and develops normally.

Reference

Chang MC, et al. (2012) Mesothelin enhances invasion of ovarian cancer by inducing MMP-7 through MAPK/ERK and JNK pathways. *Biochem J.* 442 (2): 293-302.

Nelson HH, et al. (2011) The relationship between tumor MSLN methylation and serum mesothelin (SMRP) in mesothelioma. *Epigenetics.* 6 (8): 1029-34.

Bournet B, et al. (2012) Gene expression signature of advanced pancreatic ductal adenocarcinoma using low density array on endoscopic ultrasound-guided fine needle aspiration samples. *Pancreatology.* 12 (1): 27-34.

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