Product Name: Human Mesothelin Protein Dimer, His-Avi Tag

Product Code: CSP-26451-03

FOR RESEARCH USE ONLY (RUO)

Protein Name: Mesothelin, Protein Dimer, His-Avi

Alternate Name(s): MPF, SMRP, mesothelin, Megakaryocyte-potentiating factor

Expression Host
HEK293T

Amino Acid Range
E296-S606

Protein Construct
Mesothelin dimer protein contains the Mesothelin extracellular domain (UniProt# Q13421) fused with a proprietary cis-dimer motif followed by a tandem His-Avi tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
90 kDa. Migration range of the dimer protein with glycosylation under non-reducing condition is 120-190 kDa on SDS PAGE

Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

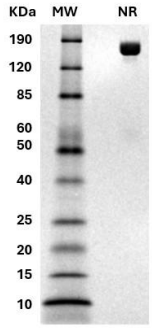
Shipping Conditions
Product is shipped at ambient temperature.

Formulation
Lyophilized from 0.22 μm filtered solution in PBS, pH 7.4 with 10% trehalose as a protectant

Stability & Storage
On receipt, store at -20 C or lower for long term storage.
This product is stable at:
-20 to -70 C for 12 months from date of receipt in lyophilized state.
-70 C for 3 months after reconstitution under sterile conditions.
Avoid repeated freeze-thaw cycles

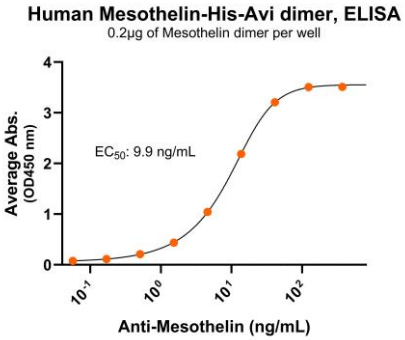
Reconstitution of lyophilized product
For best performance, we strongly recommend you reconstitute the lyophilized product with deionized water to a stock solution of 500 μg/mL.
Solubilize for 20 minutes at room temperature with occasional gentle mixing. Avoid shaking or vortexing.
For 25μg product size:
Reconstitute with 50 μL sterile deionized water.
For 100μg product size:
Reconstitute with 200 μL sterile deionized water.

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: Mesothelin dimer under non-reduced condition
Migration range of the dimer protein with glycosylation under non-reducing condition is 120-190 kDa on SDS PAGE

Antibody Binding



Immobilized human Mesothelin dimer protein, His-Avi tag (Cat. No. CSP-26451-03) at 2 μg/mL (100 μL/well) can bind anti-human Mesothelin monoclonal antibody, with half maximal effective concentration (EC50) range of 5-19.8 ng/mL (QC tested).

Background

Human Mesothelin (MSLN) is a membrane-anchored protein and is also known as Megakaryocyte-potentiating factor (MPF). Mesothelin is expressed on mesothelial cells and is likely involved in cell adhesion. Mesothelin contains an extracellular N-terminus that has been identified as the functional binding domain for MUC16/CA125. It is attached to the outer leaflet of the plasma membrane by a glycosylphosphatidylinositol (GPI) anchor. Mesothelin binding MUC16 may be implicated in the spread of some tumors and can be exploited as a tumor marker as Mesothelin is highly expressed in in several human tumors, including mesothelioma, ovarian cancer, pancreatic adenocarcinoma, lung adenocarcinoma. Mesothelin is becoming an important target to investigate CAR-T therapy for solid tumors.