

Anti-Mesothelin MSLN Monoclonal Antibody

Catalog Number: M03266

About MSLN

Anti Mesothelin Antibody recognizes Mesothelin that is a glycosyl-phosphatidylinositol-anchored glycoprotein present on the cell surface of various human solid tumors. The mesothelin (MSLN) gene encodes a 71-kDa precursor protein that is processed to a 40-kDa glycosylphosphatidylinositol-anchored protein that composes the mature portion and an NH2 terminal 31-kDa fragment called megakaryocyte-potentiating factor that is released from the cell. Mesothelin is a tumor differentiation antigen present at low levels on a restricted set of normal adult tissues, such as mesothelium, but aberrantly over expressed in mesotheliomas, ovarian, and pancreatic cancers. The biological functions of mesothelin remain elusive. A recent study showed that mesothelin binds to MUC16/CA125, and that this interaction mediates cell adhesion, suggesting that there may be an important role for MUC16/CA125 and mesothelin in the metastatic spread of ovarian cancer.

Overview

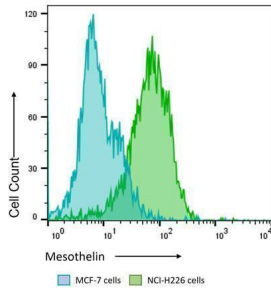
Product Name	Anti-Mesothelin MSLN Monoclonal Antibody
Reactive Species	Human
Description	Boster Bio Anti-Mesothelin MSLN Monoclonal Antibody (Catalog # M03266). Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human.
Application	ELISA, Flow Cytometry, IHC, WB
Clonality	Monoclonal Clone: MN-1 IgG2a
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	Store vial at -20°C prior to opening. Aliquot contents and freeze at -20°C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening. (Ship on dry ice.)
Host	Mouse
Uniprot ID	Q13421

Technical Details

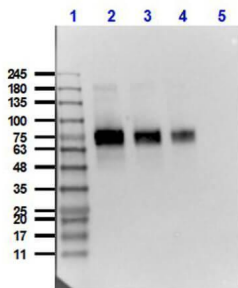
Immunogen	This antibody was produced in mesothelin-deficient mice by immunizations with plasmid cDNA encoding human MSLN full length protein followed by a single boost of a recombinant human mesothelin-Fc fusion protein.
Predicted Reactive Species	Chimpanzee, Macaque
Cross Reactivity	No cross reactivity with other proteins.
Isotype	IgG2a

Form	Liquid (sterile filtered)
Concentration	1.0 mg/mL by UV absorbance at 280 nm
Purification	This antibody is directed against human mesothelin protein. This product was purified from tissue culture supernatant fluid by Protein A chromatography. Cross-reactivity with homologues from other sources has not been tested.
Suggested Dilutions	ELISA: 1:10,000 - 1:50,000 Flow Cytometry: 1:800 IHC: 1:100 WB: 1:1,000 This antibody has been tested for use in immunohistochemistry, flow cytometry, and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 40 kDa in size corresponding to mature mesothelin by western blotting in the appropriate cell lysate or extract. For immunohistochemistry, archival PEFF human tissues were deparaffinized followed by hydration. Antigen-retrieval is recommended. Block tissues with 1% BSA in PBS for 30 min at 23° C. Antibodies are diluted in 1% BSA and reacted with tissue for 60 min at room temperature.

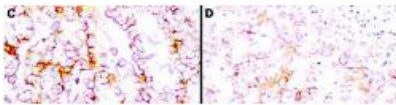
Anti-Mesothelin MSLN Monoclonal Antibody (M03266) Images



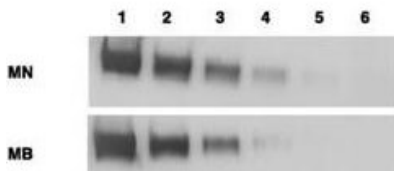
Flow Cytometry Results of Anti-Mesothelin (MOUSE) Monoclonal Antibody. The green histogram shows NCI-H226 cells and blue histogram shows MCF-7 cells. Both cell lines are stained with a 1:800 dilution Anti-Mesothelin (MOUSE) Monoclonal Antibody. The secondary antibody use was Anti-Mouse IgG (H&L) (GOAT) Antibody DyLight™ 488 Conjugated at the 1:400 dilution.



Western Blot of Mouse Anti-Mesothelin Antibody. Lane 1: Opal Prestained Molecular Weight Marker . Lane 2: HeLa [10µg] + Mesothelin-Fc [0.1µg]. Lane 3: HeLa [10µg] + Mesothelin-Fc [0.05µg]. Lane 4: HeLa [10µg] + Mesothelin-Fc [0.02µg]. Lane 5: HeLa Whole Cell Lysate . Primary Antibody: Anti-Mesothelin at 1µg/mL overnight at 2-8°C. Secondary Antibody: Rabbit Anti-Mouse IgG HRP conjugated at 1:40,000 for 30 mins at RT. Block: BlockOut Buffer 30 mins at RT. Exposure: 15 sec. Predicted MW: 40kDa Mesothelin + Fc region 30kDa. Observed MW: ~70-75kDa.

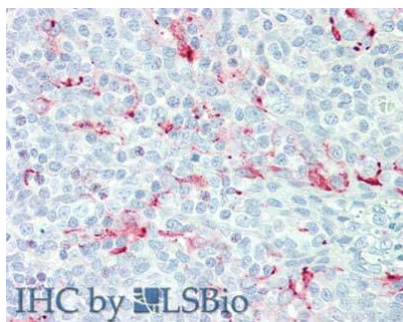


Immunohistochemistry using Boster's anti-mesothelin antibody to react with two epitopes on mesothelin in PEFF human mesothelioma tissue sections treated by antigen retrieval methods. Anti-mesothelin primary antibodies were used at 10 µg/mL to label these sections as follows: C, MAb MB; and D, MAb MN followed by goat anti-mouse IgG conjugated to horseradish peroxidase at 25 µg/mL in 1% BSA/PBS for 30 minutes. (magnification, ×200; bar, 50 µm). Reprinted with permission from Clin.Cancer Res. 11(16):5840-6.



Western blotting using Boster's anti-mesothelin antibodies to detect mesothelin-Fc at 100 ng (lane 1), 25 ng (lane 2), 6 ng (lane 3), 2 ng (lane 4) and 0.4 ng (lane 5). Lane 6 contains 50 ng of CDC25-Fc. Proteins were separated on 4-20% gradient gel by SDS-PAGE followed by transfer to PVDF membrane. Primary antibody was used at 1 µg/ml followed by reaction with ALP goat anti-mouse IgG and BCIP/NBT substrate. Reprinted with permission from Clin.Cancer Res. 11(16):5840-6.

Immunohistochemistry of Mouse anti-Mesothelin antibody. Tissue: human tonsil. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: anti-Mesothelin antibody at 15 µg/mL for 1 h at RT. Secondary antibody: Peroxidase mouse secondary antibody at 1:10,000 for 45 min at RT. Staining: Mesothelin as precipitated red signal with hematoxylin purple nuclear counterstain.



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