

Anti-Mesothelin Antibody [PD00-68]

HA721175



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IF-Tissue
Molecular Wt:	Predicted band size: 69 kDa
Clone number:	PD00-68

Description: Mesothelin is a 40 kDa protein that is expressed in mesothelial cells. The protein was first identified by its reactivity with monoclonal antibody K1. Subsequent 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 glycoposphatidylinositol 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. Mesothelin is over expressed in several human tumors, including mesothelioma, ovarian cancer, pancreatic adenocarcinoma, lung adenocarcinoma, and cholangiocarcinoma. Mesothelin binds MUC16 (also known as CA125), indicating that the interaction of mesothelin and MUC16 may contribute to the implantation and peritoneal spread of tumors by cell adhesion. The region (residues 296-359) consisting of 64 amino acids at the N-terminus of cell surface mesothelin has been identified as the functional binding domain (named IAB) for MUC16/CA125, suggesting the mechanism of mesothelin acting as a MUC16/CA125 functional partner in cancer development.

Immunogen: Synthetic peptide within Human Mesothelin aa 550 to the C-terminus.

Positive control: HeLa cell lysate, SK-OV-3 cell lysate, OVCAR-3 cell lysate, SiHa cell lysate, NCI-H226 cell lysate, human mesothelioma tissue, human ovarian cancer tissue, human tonsil tissue.

Subcellular location: Cell membrane, Golgi apparatus; Secreted.

Database links: SwissProt: Q13421 Human

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000
IF-Tissue	1:500

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

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Orders:0086-571-88062880

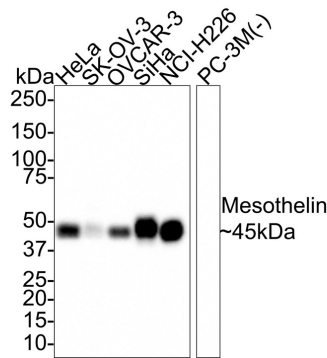
Technical:0086-571-89986345

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Images

Fig1: Western blot analysis of Mesothelin on different lysates with Rabbit anti-Mesothelin antibody (HA721175) at 1/1,000 dilution.



Lane 1: HeLa cell lysate
 Lane 2: SK-OV-3 cell lysate
 Lane 3: OVCAR-3 cell lysate
 Lane 4: SiHa cell lysate
 Lane 5: NCI-H226 cell lysate
 Lane 6: PC-3M cell lysate (negative)

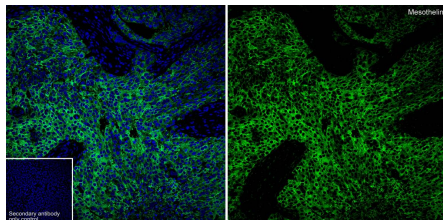
Lysates/proteins at 20 µg/Lane.

Predicted band size: 69 kDa
 Observed band size: 45 kDa

Exposure time: 7 seconds;
 4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721175) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/100,000 dilution was used for 1 hour at room temperature.

Fig2: Application: IF-Tissue



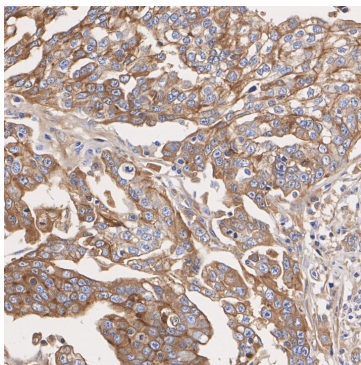
Species: Human

Site: ovarian cancer

Sample: Paraffin-embedded section

Antibody concentration: 1/500

Fig3: Immunohistochemical analysis of paraffin-embedded human mesothelioma tissue with Rabbit anti-Mesothelin antibody (HA721175) at 1/1,000 dilution.



The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721175) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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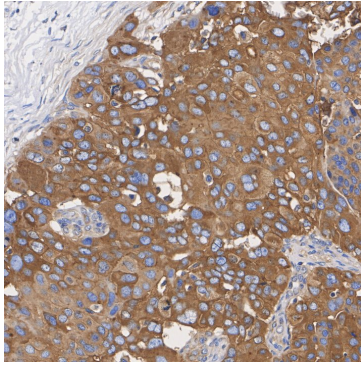


Fig4: Immunohistochemical analysis of paraffin-embedded human ovarian cancer tissue with Rabbit anti-Mesothelin antibody (HA721175) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721175) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

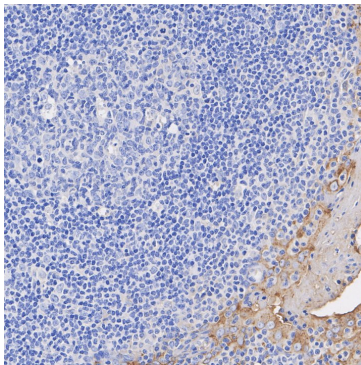


Fig5: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-Mesothelin antibody (HA721175) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721175) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Klampatsa A et al. Mesothelin-targeted CAR-T cell therapy for solid tumors. *Expert Opin Biol Ther.* 2021 Apr
2. Adusumilli PS et al. A Phase I Trial of Regional Mesothelin-Targeted CAR T-cell Therapy in Patients with Malignant Pleural Disease, in Combination with the Anti-PD-1 Agent Pembrolizumab. *Cancer Discov.* 2021 Nov

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