

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Mesothelin in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human MPF is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 618923
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Mesothelin Glu296-Asp580 Accession # Q13421
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

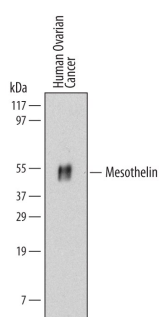
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Simple Western	20 µg/mL	See Below

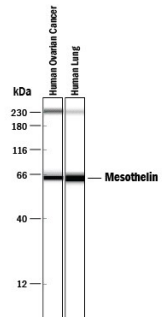
DATA

Western Blot




Detection of Human Mesothelin by Western Blot. Western blot shows lysates of human ovarian cancer tissue. PVDF Membrane was probed with 2 µg/mL of Human Mesothelin Monoclonal Antibody (Catalog # MAB32653) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Mesothelin at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Human Mesothelin by Simple Western™. Simple Western lane view shows lysates of human ovarian cancer tissue and human lung tissue, loaded at 0.2 mg/mL. A specific band was detected for Mesothelin at approximately 65 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human Mesothelin Monoclonal Antibody (Catalog # MAB32653). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

*Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Mesothelin, also known as CAK1 and ERC, is derived from a 70 kDa precursor that also includes Megakaryocyte Potentiating Factor (MPF) (1-3). The 70 kDa precursor is expressed on the cell surface where it is cleaved at a dibasic proteolytic site to release the 32 kDa glycosylated MPF (3, 4). MPF is a cytokine that potentiates IL-3 induced megakaryocyte colony formation (2, 5). The term Mesothelin refers to the 40 kDa glycosylated protein which remains attached to the cell surface via a GPI linkage. Alternate splicing generates additional Mesothelin isoforms that have either an eight amino acid insertion following Ser408 or a substituted C-terminal region with no GPI anchor (6). Within aa 29-580, human Mesothelin shares 59% sequence identity with mouse and rat Mesothelin. Mesothelin is normally expressed on mesothelial cells in the pleura, pericardium, and peritoneum as well as in the developing and postnatal pancreas (1, 7). It is upregulated in mesotheliomas and a range of carcinomas and adenomas (8-11). Mesothelin promotes tumor cell proliferation, migration, anchorage-independent growth, and tumor progression (10, 12). It is coexpressed with the tumor antigen CA125/MUC16 on advanced ovarian adenocarcinomas and interacts with this molecule to support cell adhesion (13). A soluble form of Mesothelin is released from tumor cells into the serum or tissue effusions (11, 14, 15).

References:

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