

# Mesothelin (K1): sc-33672

## BACKGROUND

Mesothelin is a glycosylphosphatidylinositol-linked cell-surface molecule expressed in the mesothelial lining of the body cavities and in many tumor cells. Mesothelin is a tumor antigen on the surface of human ovarian cancers and mesotheliomas. Mesothelin immunoreactivity is high in cancers of the ovary (serous papillary, endometrioid, and undifferentiated) and pancreas, with less frequent staining seen in adenocarcinomas of the endometrium, lung and stomach/esophagus. In adult mouse tissues the Mesothelin transcript is present in lung, heart, spleen, liver, kidney and testis.

## CHROMOSOMAL LOCATION

Genetic locus: MSLN (human) mapping to 16p13.3; Msln (mouse) mapping to 17 A3.3.

## SOURCE

Mesothelin (K1) is a mouse monoclonal antibody raised against spleen lymphocytes from mice fused with OVCAR-3 ovarian tumor cell line.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mesothelin (K1) is available conjugated to agarose (sc-33672 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33672 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33672 PE), fluorescein (sc-33672 FITC), Alexa Fluor® 488 (sc-33672 AF488), Alexa Fluor® 546 (sc-33672 AF546), Alexa Fluor® 594 (sc-33672 AF594) or Alexa Fluor® 647 (sc-33672 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33672 AF680) or Alexa Fluor® 790 (sc-33672 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Mesothelin (K1) is recommended for detection of Mesothelin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for Mesothelin siRNA (h): sc-45386, Mesothelin siRNA (m): sc-45387, Mesothelin shRNA Plasmid (h): sc-45386-SH, Mesothelin shRNA Plasmid (m): sc-45387-SH, Mesothelin shRNA (h) Lentiviral Particles: sc-45386-V and Mesothelin shRNA (m) Lentiviral Particles: sc-45387-V.

Molecular Weight of Mesothelin precursor: 69 kDa.

Molecular Weight of mature Mesothelin: 40 kDa.

Positive Controls: Mesothelin (h2): 293T Lysate: sc-171058, ES-2 cell lysate: sc-24674 or A549 cell lysate: sc-2413.

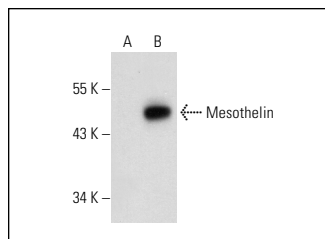
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

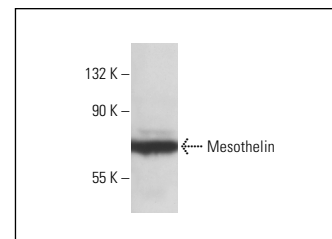
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



Mesothelin (K1): sc-33672. Western blot analysis of Mesothelin expression in non-transfected: sc-117752 (A) and human Mesothelin transfected: sc-171058 (B) 293T whole cell lysates.



Mesothelin (K1): sc-33672. Western blot analysis of Mesothelin expression in ES-2 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Johnston, F.M., et al. 2009. Circulating Mesothelin protein and cellular antimesothelin immunity in patients with pancreatic cancer. *Clin. Cancer Res.* 15: 6511-6518.
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- Prantner, A.M., et al. 2015. Anti-Mesothelin nanobodies for both conventional and nanoparticle-based biomedical applications. *J. Biomed. Nanotechnol.* 11: 1201-1212.
- Tatzel, K., et al. 2016. Membrane-proximal TRAIL species are incapable of inducing short circuit apoptosis signaling: implications for drug development and basic cytokine biology. *Sci. Rep.* 6: 22661.
- Yoneda, K., et al. 2018. Capture of mesothelioma cells with "universal" CTC-chip. *Oncol. Lett.* 15: 2635-2640.
- Ye, S., et al. 2019. A bispecific molecule targeting CD40 and tumor antigen Mesothelin enhances tumor-specific immunity. *Cancer Immunol. Res.* 7: 1864-1875.
- Qin, L., et al. 2020. Chimeric antigen receptor T cells targeting PD-L1 suppress tumor growth. *Biomark. Res.* 8: 19.
- Rodriguez-Garcia, A., et al. 2021. CAR-T cell-mediated depletion of immunosuppressive tumor-associated macrophages promotes endogenous antitumor immunity and augments adoptive immunotherapy. *Nat. Commun.* 12: 877.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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