SANTA CRUZ BIOTECHNOLOGY, INC.

Mesothelin (C-2): sc-365324

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

REFERENCES

1. Chang, K. and Pastan, I. 1996. Molecular cloning of Mesothelin, a differentiation antigen present on mesothelium, mesotheliomas, and ovarian cancers. Proc. Natl. Acad. Sci. USA 93: 136-140.
2. Chowdhury, P.S., et al. 1997. Isolation of anti-Mesothelin antibodies from a phage display library. Mol. Immunol. 34: 9-20.
3. Hassan, R., et al. 1999. ^{111}Indium-labeled monoclonal antibody K1: biodistribution study in nude mice bearing a human carcinoma xenograft expressing Mesothelin. Int. J. Cancer 80: 559-563.
4. Bera, T.K. and Pastan, I. 2000. Mesothelin is not required for normal mouse development or reproduction. Mol. Cell. Biol. 20: 2902-2906.

CHROMOSOMAL LOCATION

Genetic locus: MSLN (human) mapping to 16p13.3.

SOURCE

Mesothelin (C-2) is a mouse monoclonal antibody raised against amino acids 295-574 mapping near the C-terminus of Mesothelin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Mesothelin (C-2) is recommended for detection of Mesothelin of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of Mesothelin precursor: 69 kDa.

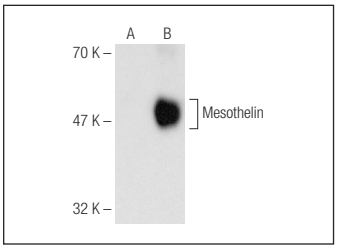
Molecular Weight of mature Mesothelin: 40 kDa.

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

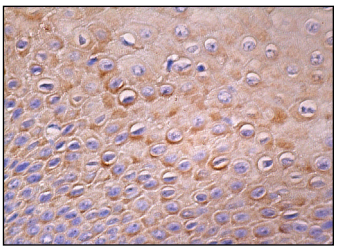
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Mesothelin (C-2): sc-365324. Western blot analysis of Mesothelin expression in non-transfected: sc-117752 (**A**) and human Mesothelin transfected: sc-171058 (**B**) 293T whole cell lysates.



Mesothelin (C-2): sc-365324. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Gu, Z., et al. 2018. Postprandial increase in serum CA125 as a surrogate biomarker for early diagnosis of ovarian cancer. J. Transl. Med. 16: 114.
2. Corciulo, S., et al. 2019. AQP1-containing exosomes in peritoneal dialysis effluent as biomarker of dialysis efficiency. Cells 8: 330.
3. Huo, Q., et al. 2021. Free CA125 promotes ovarian cancer cell migration and tumor metastasis by binding Mesothelin to reduce DKK1 expression and activate the SGK3/FOXO3 pathway. Int. J. Biol. Sci. 17: 574-588.
4. Piccapane, F., et al. 2021. Aquaporin-1 facilitates transmesothelial water permeability: *in vitro* and *ex vivo* evidence and possible implications in peritoneal dialysis. Int. J. Mol. Sci. 22: 12535.

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.

CONJUGATES

See **Mesothelin (K1): sc-33672** for Mesothelin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.