SANTA CRUZ BIOTECHNOLOGY, INC.

Mesothelin (G-1): sc-271540

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.

CHROMOSOMAL LOCATION

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

SOURCE

Mesothelin (G-1) 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_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mesothelin (G-1) is available conjugated to agarose (sc-271540 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271540 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271540 PE), fluorescein (sc-271540 FITC), Alexa Fluor® 488 (sc-271540 AF488), Alexa Fluor® 546 (sc-271540 AF546), Alexa Fluor® 594 (sc-271540 AF594) or Alexa Fluor® 647 (sc-271540 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271540 AF680) or Alexa Fluor® 790 (sc-271540 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

Mesothelin (G-1) 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.

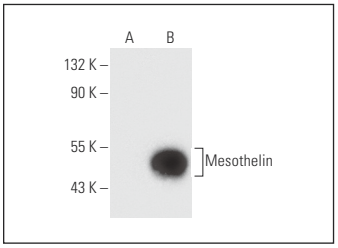
Molecular Weight of mature Mesothelin: 40 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, AN3 CA cell lysate: sc-24662 or Mesothelin (h2): 293T Lysate: sc-171058.

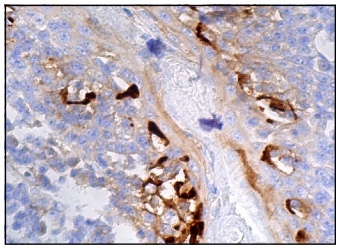
RECOMMENDED SUPPORT REAGENTS

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 (G-1): sc-271540. Western blot analysis of Mesothelin expression in non-transfected: sc-117752 (**A**) and human Mesothelin transfected: sc-171058 (**B**) 293T whole cell lysates.



Mesothelin (G-1): sc-271540. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of epithelial cells.

SELECT PRODUCT CITATIONS

1. Garritano, S., et al. 2014. A common polymorphism within MSLN affects miR-611 binding site and soluble Mesothelin levels in healthy people. J. Thorac. Oncol. 9: 1662-1668.
2. Han, S.J., et al. 2016. Expression and prognostic impact of immune modulatory molecule PD-L1 in meningioma. J. Neurooncol. 130: 543-552.
3. De Santi, C., et al. 2017. Identification of miR-21-5p as a functional regulator of Mesothelin expression using microRNA capture affinity coupled with next generation sequencing. PLoS ONE 12: e0170999.
4. Jirapongwattana, N., et al. 2022. Mesothelin-specific T cell cytotoxicity against triple negative breast cancer is enhanced by 40s ribosomal protein subunit 3-treated self-differentiated dendritic cells. Oncol. Rep. 48: 127.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.