SANTA CRUZ BIOTECHNOLOGY, INC.

MD-1 (N-17): sc-20612

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

RP105 (CD180) was originally discovered as a mouse B cell surface molecule that transmits an activation signal. This signal leads to resistance against irradiation-induced apoptosis and massive B cell proliferation. RP105 is associated with another molecule, MD-1, which has an important role in the cell surface expression of RP105. MD-1, also known as Lymphocyte Antigen 68 and RP105 Associated Protein, associates with and regulates the cell surface expression of RP105. RP105/MD-1 constitutes an LPS-signaling complex on B cells and, like MD-2, enhances the LPS signaling via TLR4. MD-1 contains 162 amino acids and has a predicted 19-amino acid signal peptide and 2 N-glycosylation sites. MD1 is highly expressed in B cells, monocytes and tonsil and is localized on the surface of cells despite its lack of a transmembrane region.

REFERENCES

1. Miura, Y., Shimazu, R., Miyake, K., Akashi, S., Ogata, H., Yamashita, Y., Narisawa, Y. and Kimoto, M. 1998. RP105 is associated with MD-1 and transmits an activation signal in human B cells. Blood 92: 2815-2822.
2. Miyake, K., Ogata, H., Nagai, Y., Akashi, S. and Kimoto, M. 2000. Innate recognition of lipopolysaccharide by Toll-like receptor 4/MD-2 and RP105/MD-1. J. Endotoxin Res. 6: 389-391.
3. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605241. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Nagai, Y., Shimazu, R., Ogata, H., Akashi, S., Sudo, K., Yamasaki, H., Hayashi, S., Iwakura, Y., Kimoto, M. and Miyake, K. 2002. Requirement for MD-1 in cell surface expression of RP105/CD180 and B cell responsiveness to lipopolysaccharide. Blood 99: 1699-1705.
5. Clark, DA., Yu, G., Arck, P.C., Levy, G.A. and Gorczynski, R.M. 2003. MD-1 is a critical part of the mechanism causing Th1-cytokine-triggered murine fetal loss syndrome. Am. J. Reprod. Immunol. 49: 297-307.

CHROMOSOMAL LOCATION

Genetic locus: LY86 (human) mapping to 6p25.1; Ly86 (mouse) mapping to 13 A3.3.

SOURCE

MD-1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MD-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20612 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MD-1 (N-17)x is recommended for detection of MD-1 of human origin by Western Blotting (starting dilution 1:200, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MD-1 siRNA (h): sc-40734, MD-1 shRNA Plasmid (h): sc-40734-SH and MD-1 shRNA (h) Lentiviral Particles: sc-40734-V.

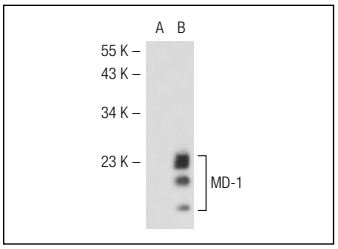
Molecular Weight of MD-1: 28 kDa.

Positive Controls: MD-1 (h): 293T Lysate: sc-115485.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MD-1 (N-17): sc-20612. Western blot analysis of MD-1 expression in non-transfected: sc-117752 (**A**) and human MD-1 transfected: sc-115485 (**B**) 293T whole cell lysates.

RESEARCH USE

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