SANTA CRUZ BIOTECHNOLOGY, INC.

DNAM-1 (4j67): sc-70980



BACKGROUND

The T cell antigen receptor (TCR) recognizes foreign antigens and translates such recognition events into intracellular signals that elicit a change in the cell from a dormant to an activated state. Additional proteins termed "accessory molecules" are also required for activation and for cytotoxic T lymphocyte (CTL)-mediated cytotoxicity. For instance, CD2, CD4, CD8, LFA-1 and CD28 are examples of well characterized accessory molecules. An accessory molecule designated DNAX accessory molecule-1, or DNAM-1, has been described. DNAM-1 is a transmembrane glycoprotein that is 318 amino acids in length and contains two immunoglobulin-like domains. DNAM-1 is expressed on both T cells and natural killer (NK) cells and participates in primary adhesion during CTL-mediated cytotoxicity.

REFERENCES

- Arthos, J., Deen, K.C., Chaikin, M.A., Fornwald, J.A., Sathe, G., Sattentau, Q.J., Clapham, P.R., Weiss, R.A., McDougal, J.S. and Pietropaolo, C. 1989. Identification of the residues in human CD4 critical for the binding of HIV. Cell 57: 469-481.
- 2. Weiss, A., Irving, B.A., Tan, L.K. and Koretzky, G.A. 1991. Signal transduction by the T cell antigen receptor. Semin. Immunol. 3: 313-324.
- 3. Allison, J.P. and Havran, W.L. 1991. The immunobiology of T cells with invariant $\gamma\delta$ antigen receptors. Annu. Rev. Immunol. 9: 679-705.
- Ehrich, E.W., Devaux, B., Rock, E.P., Jorgensen, J.L., Davis, M.N. and Chien, Y.H. 1993. T cell receptor interaction with peptide/major histocompatibility complex (MHC) and superantigen/MHC ligands is dominated by antigen. J. Exp. Med. 178: 713-722.
- Julius, M., Maroun, C.R. and Haughn, L. 1993. Distinct roles for CD4 and CD8 as co-receptors in antigen receptor signalling. Immunol. Today 14: 177-183.
- Vignali, D.A. 1994. The interaction between CD4 and MHC class II molecules and its effect on T cell function. Behring Inst. Mitt. 94: 133-147.
- Shibuya, A., Campbell, D., Hannum, C., Yssel, H., Franz-Bacon, K., McClanahan, T., Kitamura, T., Nicholl, J., Sutherland, G.R., Lanier, L.L. and Phillips, J.H. 1996. DNAM-1, a novel adhesion molecule involved in the cytolytic function of T lymphocytes. Immunity 4: 573-581.

CHROMOSOMAL LOCATION

Genetic locus: CD226 (human) mapping to 18q22.3.

SOURCE

DNAM-1 (4j67) is a mouse monoclonal antibody raised against NK cell lines 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.

DNAM-1 (4j67) is available conjugated to either phycoerythrin (sc-70980 PE) or fluorescein (sc-70980 FITC), 200 μ g/ml, for IF, IHC(P) and FCM.

APPLICATIONS

DNAM-1 (4j67) is recommended for detection of DNAM-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for DNAM-1 siRNA (h): sc-35202, DNAM-1 shRNA Plasmid (h): sc-35202-SH and DNAM-1 shRNA (h) Lentiviral Particles: sc-35202-V.

Molecular Weight of DNAM-1: 65 kDa.

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).

STORAGE

Store at 4° C, **D0 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.

PROTOCOLS

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