# DNAM-1 (Y-15): sc-31039



The Power to Question

#### **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 γ δ 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.
- 5. 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.
- 7. 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; Cd226 (mouse) mapping to 18 E4.

## **SOURCE**

DNAM-1 (Y-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DNAM-1 of mouse origin.

## **STORAGE**

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

#### **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31039 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

DNAM-1 (Y-15) is recommended for detection of DNAM-1 of mouse and, to a lesser extent, rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2  $\mu$ g per 100–500  $\mu$ g 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 DNAM-1 siRNA (m): sc-45776.

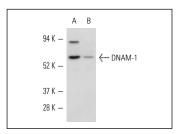
Molecular Weight of DNAM-1: 65 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242 or TK-1 whole cell lysate.

## **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) Immunopre cipitation: 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



DNAM-1 (Y-15): sc-31039. Western blot analysis of DNAM-1 expression in TK-1 (**A**) and CTLL-2 (**B**) whole cell lysates.

# **RESEARCH USE**

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

#### **PROTOCOLS**

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