# SANTA CRUZ BIOTECHNOLOGY, INC.

# CD2 (3B6): sc-18907



# BACKGROUND

CD2 (also designated E-rosette receptor) interacts through its amino-terminal domain with the extracellular domain of CD58 (also designated CD2 ligand) to mediate cell adhesion. CD2/CD58 binding can enhance antigen-specific T cell activation. CD2 is a transmembrane glycoprotein that is expressed on peripheral blood T lymphocytes, NK cells and thymocytes, as well as on mouse B cells and rat splenic macrophages. CD58 is a heavily glycosylated protein with a broad tissue distribution in hematopoietic and other cells, including endothelium. Interaction on opposing cells between CD2 and its counter-receptor, LFA3 (CD58), optimizes immune system recognition, thereby facilitating communication between helper T lymphocytes and antigen-presenting cells, as well as between cytolytic effectors and target cells.

#### REFERENCES

- 1. Shaw, A.S., et al. 1997. Making the T cell receptor go the distance: a topological view of T cell activation. Immunity 6: 361-369.
- Dustin, M.L., et al. 1998. A novel adaptor protein orchestrates receptor patterning and cytoskeletal polarity in T cell contacts. Cell 94: 667-677.
- Nishizawa, K., et al. 1998. Identification of a proline-binding motif regulating CD2-triggered T lymphocyte activation. Proc. Natl. Acad. Sci. USA 95: 14897-14902.

# CHROMOSOMAL LOCATION

Genetic locus: CD2 (human) mapping to 1p13.1; Cd2 (mouse) mapping to 3 F2.2.

### SOURCE

CD2 (3B6) is a mouse monoclonal antibody raised against CD2 of human origin.

#### PRODUCT

Each vial contains 200  $\mu g$  IgG\_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD2 (3B6) is available conjugated to either phycoerythrin (sc-18907 PE) or fluorescein (sc-18907 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

## **APPLICATIONS**

CD2 (3B6) is recommended for detection of CD2 of mouse, rat and human 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 flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD2 siRNA (h): sc-29970, CD2 siRNA (m): sc-29971, CD2 shRNA Plasmid (h): sc-29970-SH, CD2 shRNA Plasmid (m): sc-29971-SH, CD2 shRNA (h) Lentiviral Particles: sc-29970-V and CD2 shRNA (m) Lentiviral Particles: sc-29971-V.

Molecular Weight of CD2: 50 kDa.

Positive Controls: CD2 (h): 293T Lysate: sc-114105, HuT 78 whole cell lysate: sc-2208 or Jurkat whole cell lysate: sc-2204.

#### **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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

# DATA









CD2 (386): sc-18907. Western blot analysis of CD2 expression in non-transfected 293T: sc-117752 (**A**), human CD2 transfected 293T: sc-114105 (**B**) and Jurkat (**C**) whole cell lysates.



CD2 (3B6): sc-18907. Western blot analysis of CD2 expression in non-transfected 2937: sc-117752 ( $\mathbf{A}$ ), human CD2 transfected 2937: sc-172563 ( $\mathbf{B}$ ) and Jurkat ( $\mathbf{C}$ ) whole cell lysates.

CD2 (3B6) PE: sc-18907 PE. FCM analysis of human peripheral blood leukocytes. Quadrant markers were set based on the isotype control, normal mouse IgG<sub>1</sub>-PE: sc-2866.

### 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.