SANTA CRUZ BIOTECHNOLOGY, INC.

CD2 (MT910): sc-19638

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 between CD2 and its counterreceptor LFA3 (CD58) on opposing cells 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.
2. Dustin, M.L., et al. 1998. A novel adaptor protein orchestrates receptor patterning and cytoskeletal polarity in T cell contacts. Cell 94: 667-677.
3. 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.
4. Shih, N.Y., et al. 1999. Congenital nephrotic syndrome in mice lacking CD2-associated protein. Science 286: 312-315.
5. Guan, F., et al. 2006. Autocrine VEGF-A system in podocytes regulates podocin and its interaction with CD2AP. Am. J. Physiol. Renal Physiol. 291: F422-F428.

CHROMOSOMAL LOCATION

Genetic locus: CD2 (human) mapping to 1p13.1.

SOURCE

CD2 (MT910) is a mouse monoclonal antibody raised against CD2 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.

CD2 (MT910) is available conjugated to agarose (sc-19638 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-19638 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19638 PE), fluorescein (sc-19638 FITC), Alexa Fluor® 488 (sc-19638 AF488), Alexa Fluor® 546 (sc-19638 AF546), Alexa Fluor® 594 (sc-19638 AF594) or Alexa Fluor® 647 (sc-19638 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19638 AF680) or Alexa Fluor® 790 (sc-19638 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CD2 (MT910) is recommended for detection of CD2 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), 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 CD2 siRNA (h): sc-29970, CD2 shRNA Plasmid (h): sc-29970-SH and CD2 shRNA (h) Lentiviral Particles: sc-29970-V.

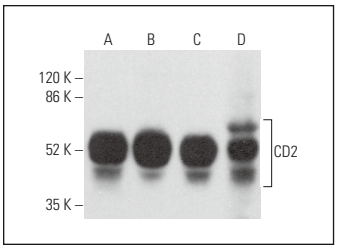
Molecular Weight of CD2: 50 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MOLT-4 cell lysate: sc-2233 or SUP-T1 whole cell lysate: sc-364796.

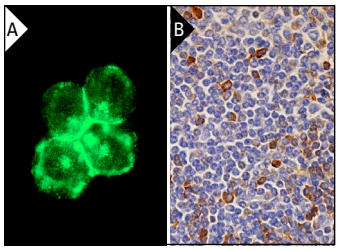
RECOMMENDED SUPPORT REAGENTS

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



CD2 (MT910): sc-19638. Western blot analysis of CD2 expression in Jurkat (**A**), MOLT-4 (**B**) and SUP-T1 (**C**) whole cell lysates and human lymph node tissue extract (**D**). Detection reagent used: m-IgGκ BP-HRP: sc-516102.



CD2 (MT910): sc-19638. Immunofluorescence staining of methanol-fixed Jurkat cells showing membrane staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic and membrane staining of subset of cells in white pulp and subset of cells in red pulp (**B**).

SELECT PRODUCT CITATIONS

1. Christodoulou, V., et al. 2011. *Leishmania infantum* and *Toxoplasma gondii:* mixed infection of macrophages *in vitro* and *in vivo.* Exp. Parasitol. 128: 279-284.

STORAGE

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