

CD2 (M-180): sc-28807

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.
6. Fan, Q., et al. 2006. The relationship among nephrin, podocin, CD2AP and α -actinin might not be a true "interaction" in podocyte. *Kidney Int.* 69: 1207-1215.

CHROMOSOMAL LOCATION

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

SOURCE

CD2 (M-180) is a rabbit polyclonal antibody raised against amino acids 23-202 mapping within an extracellular domain of CD2 of mouse origin.

PRODUCT

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

STORAGE

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

PROTOCOLS

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

APPLICATIONS

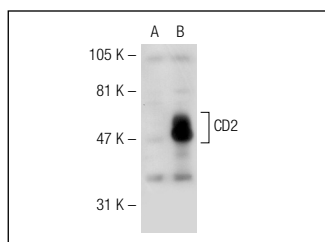
CD2 (M-180) is recommended for detection of CD2 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, 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 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.

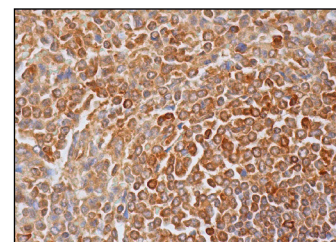
Molecular Weight of CD2: 50 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242, mouse thymus extract: sc-2406 or BW5147 cell lysate: sc-3800.

DATA



CD2 (M-180): sc-28807. Western blot analysis of CD2 expression in non-transfected: sc-117752 (A) and human CD2 transfected: sc-114105 (B) 293T whole cell lysates.



CD2 (M-180): sc-28807. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp.

RESEARCH USE

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



Try **CD2 (RM2-5): sc-19639** or **CD2 (MT910): sc-19638**, our highly recommended monoclonal alternatives to CD2 (M-180).