

1B-201-C025

Monoclonal Antibody to CD2 Biotin conjugated (0.025 mg)

Clone:	MEM-65
Isotype:	Mouse IgG1
Specificity:	The antibody MEM-65 recognizes an unique epitope of CD2, a 50 kDa glycoprotein present on the human peripheral blood T-lymphocytes and NK cells; also expressed by all thymocytes. HLDA VI; WS Code T 6T-012
Immunogen:	Human peripheral T cells.
Species Reactivity:	Human
Preparation:	The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions. The reagent is free of unconjugated biotin.
Concentration:	1 mg/ml
Storage Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Storage / Stability:	Store at 2-8°C. Do not use after expiration date stamped on vial label. For long-term storage aliquot and store at -20°C. Avoid freeze/thaw cycles.
Usage:	Biotinylated antibody is designed for indirect immunofluorescence analysis by Flow Cytometry. Suggested working dilution is 1:1000. Indicated dilution is recommended starting point for use of this product. Working concentrations should be determined by the investigator.
Expiration:	See vial label
Lot Number:	See vial label
Background:	CD2 belongs to T lymphocyte glycoproteins of immunoglobulin superfamily. Its interaction with CD58 stabilizes adhesion between T cells and antigen presenting or target cells. Relatively low affinity of CD2 to CD58 (as measured in solution) is compensated within the two-dimensional cell-cell interface to provide tight adhesion. Moreover, T cell activation induces increased CD2 expression and its lateral mobility, making easier contact between CD2 and CD58. Subsequently, T cell activation causes fixation of CD58-CD2 at sites of cell-cell contact, thereby strengthening intercellular adhesion. CD2 deficiency reduces intestinal inflammation and helps to control infection.

For laboratory research only, not for drug, diagnostic or other use.



Antibodies

References:

- *Dustin ML: Adhesive bond dynamics in contacts between T lymphocytes and glass-supported planar bilayers reconstituted with the immunoglobulin-related adhesion molecule CD58. *J Biol Chem.* 1997 Jun 20;272(25):15782-8.
- *Zhu DM, Dustin ML, Cairo CW, Thatte HS, Golan DE.: Mechanisms of Cellular Avidity Regulation in CD2-CD58-Mediated T Cell Adhesion. *ACS Chem Biol.* 2006 Nov 21;1(10):649-58.
- *Pawlowski NN, Struck D, Grollich K, Kuhl AA, Zeitz M, Liesenfeld O, Hoffmann JC.: CD2 deficiency partially prevents small bowel inflammation and improves parasite control in murine *Toxoplasma gondii* infection. *World J Gastroenterol.* 2007 Aug 21;13(31):4207-13.
- *Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
- *Drbal K, Hilgert I, Cebecauer M, Angelisova P, Horejsi V.: New monoclonal antibodies to human leucocyte surface molecule CD2. *Folia Biol (Praha).* 1997;43(6):245-6.
- *Ilangumaran S, Briol A, Hoessli DC: CD44 selectively associates with active Src family protein tyrosine kinases Lck and Fyn in glycosphingolipid-rich plasma membrane domains of human peripheral blood lymphocytes. *Blood.* 1998 May 15;91(10):3901-8.
- *Espagnolle N, Depoil D, Zaru R, Demeur C, Champagne E, Guiraud M, Valitutti S: CD2 and TCR synergize for the activation of phospholipase Cgamma1/calcium pathway at the immunological synapse. *Int Immunol.* 2007 Mar;19(3):239-48.

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