



1P-201-T025

Monoclonal Antibody to CD2 Phycoerythrin (PE) conjugated (25 tests)

Clone:	MEM-65
Isotype:	Mouse IgG1
Specificity:	The antibody MEM-65 recognizes a 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
Regulatory Status:	RUO
Immunogen:	Human peripheral T cells.
Species Reactivity:	Human
Preparation:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
Usage:	The reagent is designed for Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (0.5 ml) is sufficient for 25 tests.
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.
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- *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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