



PB-492-T100

## Monoclonal Antibody to CD2 Pacific Blue™ conjugated (100 tests)

<b>Clone:</b>	LT2
<b>Isotype:</b>	Mouse IgG2b
<b>Specificity:</b>	The antibody LT2 reacts with 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-008
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	Normal human blood lymphocytes.
<b>Species Reactivity:</b>	Human
<b>Preparation:</b>	The purified antibody is conjugated with Pacific Blue™ under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
<b>Storage Buffer:</b>	The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.
<b>Storage / Stability:</b>	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.
<b>Usage:</b>	The reagent is designed for Flow Cytometry analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10 <sup>6</sup> cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	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.
- Filatov AV, Bachurin PS, Markova NA, Surnakova NE: [A panel of monoclonal antibodies against human lymphocyte antigens] *Eksp Onkol.* 1989;11(2):28-32.
- \*Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
- \*Gannon GA, Rhind SG, Suzui M, Zamecnik J, Sabiston BH, Shek PN, Shephard RJ: beta-Endorphin and natural killer cell cytolytic activity during prolonged exercise. Is there a connection? *Am J Physiol.* 1998 Dec;275(6 Pt 2):R1725-34.
- \*Lin CW, Liu TY, Chen SU, Wang KT, Medeiros LJ, Hsu SM: CD94 1A transcripts characterize lymphoblastic lymphoma/leukemia of immature natural killer cell origin with distinct clinical features. *Blood.* 2005 Nov 15;106(10):3567-74.

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