

PB-207-T100

Monoclonal Antibody to CD8 Pacific Blue™ conjugated (100 tests)

Clone: MEM-31

Isotype: Mouse IgG2a

Specificity: The antibody MEM-31 recognizes a conformationally-dependent epitope of CD8, a

cell surface glycoprotein found on most cytotoxic T lymphocytes that mediates efficient cell-cell interactions within the immune system. CD8 is a disulfide-linked dimer and exists as a CD8 alpha/alpha homodimer or CD8 alpha/beta heterodimer

(each monomer approx. 32-34 kDa).

The antibody does not react with formaldehyde-fixed cells; negative in Western

Blotting application.

HLDA III; WS Code T 575

Regulatory Status: RUO

Immunogen: Crude thymus membrane fraction.

Species Reactivity: Human

Preparation: 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.

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 4

μl reagent / 100 μl of whole blood or 10⁶ cells in a suspension.

The content of a vial (0.4 ml) is sufficient for 100 tests.

Expiration: See vial label

Lot Number: See vial label

Background: The CD8 T cell coreceptor (monomer approx. 32-34 kDa) is expressed as

alpha/beta heterodimer on majority of MHC I-restricted conventional T cells and thymocytes and as alpha/alpha homodimer on subsets of memory T cells, intraepithelial lymphocytes, NK cells and dendritic cells. Regulation of CD8 beta level on T cell surface seems to be an important mechanism to control their effector function. Assembly of CD8 alpha-beta but not alpha-alpha dimers is connected with formation or localization to the lipid rafts. Recruiting triggered TCR complexes to these membrane microdomains as well as affinity of TCR to MHC I is modulated by CD8, thereby affecting the functional diversity of the TCR signaling.



PRODUCT DATA SHEET

References:

*Devine L, Thakral D, Nag S, Dobbins J, Hodsdon ME, Kavathas PB: Mapping the binding site on CD8 beta for MHC class I reveals mutants with enhanced binding. J Immunol. 2006 Sep 15;177(6):3930-8.

*Pang DJ, Hayday AC, Bijlmakers MJ.: CD8 Raft localization is induced by its assembly into CD8alpha beta heterodimers, Not CD8alpha alpha homodimers. J Biol Chem. 2007 May 4;282(18):13884-94.

*van den Berg HA, Wooldridge L, Laugel B, Sewell AK: Coreceptor CD8-driven modulation of T cell antigen receptor specificity. J Theor Biol. 2007 Nov 21;249(2):395-408.

*Horejsi V et al.: Monoclonal antibodies against human leucocyte antigens. I. Antibodies against beta-2-microglobulin, immunoglobulin kappa light chains, HLA-DR-like antigens, T8 antigen, T1 antigen, a monocyte antigen, and a pan-leucocyte antigen. Folia Biol. (Praha) 32, 12 (1986).

*Leukocyte Typing III., McMichael A. J. et al (Eds.), Oxford University Press (1987).

*Horejsí V, Angelisová P, Bazil V, Kristofová H, Stoyanov S, Stefanová I, Hausner P, Vosecký M, Hilgert I: Monoclonal antibodies against human leucocyte antigens. II. Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18-kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). Folia Biol (Praha). 1988;34(1):23-34.

*Brdicková N, Brdicka T, Angelisová P, Horváth O, Spicka J, Hilgert I, Paces J, Simeoni L, Kliche S, Merten C, Schraven B, Horejsí V: LIME: a new membrane Raft-associated adaptor protein involved in CD4 and CD8 coreceptor signaling. J Exp Med. 2003 Nov 17;198(10):1453-62.

*Drbal K, Moertelmaier M, Holzhauser C, Muhammad A, Fuertbauer E, Howorka S, Hinterberger M, Stockinger H, Schütz GJ: Single-molecule microscopy reveals heterogeneous dynamics of lipid raft components upon TCR engagement. Int Immunol. 2007 May;19(5):675-84.

*Estefanía E, Flores R, Gómez-Lozano N, Aguilar H, López-Botet M, Vilches C: Human KIR2DL5 is an inhibitory receptor expressed on the surface of NK and T lymphocyte subsets. J Immunol. 2007 Apr 1;178(7):4402-10.

*Linnebacher M, Wienck A, Boeck I, Klar E: Identification of an MSI-H tumor-specific cytotoxic T cell epitope generated by the (-1) frame of U79260(FTO). J Biomed Biotechnol. 2010;2010:841451.

*Kanderova V, Kuzilkova D, Stuchly J, Vaskova M, Brdicka T, Fiser K, Hrusak O, Lund-Johansen F, Kalina T: High-resolution Antibody Array Analysis of Childhood Acute Leukemia Cells. Mol Cell Proteomics. 2016 Apr;15(4):1246-61.

Unless indicated otherwise, all products are For Research Use Only and not for diagnostic or therapeutic use. Not for resale or transfer either as a stand-alone product or as a component of another product without written consent of EXBIO. EXBIO will not be held responsible for patent infringement or other violations that may occur with the use of our products. All orders are accepted subject to EXBIO's term and conditions which are available at www.exbio.cz.

This product is provided under an agreement between Molecular Probes, Inc. (a wholly owned subsidiary of Invitrogen Corporation), and Exbio Praha, a.s., and the manufacture, use, sale or import of this product may be subject to one or more U.S. patents, pending applications, and corresponding non-U.S. equivalents, owned by Molecular Probes, Inc. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer (whether the buyer is an academic or for-profit entity), including use in flow cytometry that does not utilize a bead based array, but excluding use in combination with microarrays or High Content Screening. The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes. Commercial Purposes means any activity by a party for consideration and may include, but is not limited to: (1) use of the product or its components in manufacturing; (2) use of the product or its components to provide a service, information, or data; (3) use of the product or its components for therapeutic, diagnostic or prophylactic purposes; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research. For information on purchasing a license to this product for any other use, contact Molecular Probes, Inc., Business Development, 29851 Willow Creek Road, Eugene, OR 97402, USA, Tel: (541) 465-8300. Fax: (541) 335-0504.