EXBIO Antibodies

PRODUCT DATA SHEET

1P-553-C100

Monoclonal Antibody to CD45 (mouse) Phycoerythrin (PE) conjugated (0.1 mg)

Clone:	EM-05
Isotype:	Rat IgG
Specificity:	The antibody EM-05 reacts with mouse CD45 antigen (Leukocyte Common Antigen), a single chain type I transmembrane protein expressed at high level on cells of hematopoietic origin, except erythrocytes and platelets.
Regulatory Status:	RUO
Immunogen:	Murine peripheral blood leukocytes
Species Reactivity:	Mouse
Preparation:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography.
Concentration:	0.5 mg/ml
Storage Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
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. Suggested working concentration is 4 µg/ml. 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:	CD45 (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10% of all surface proteins in lymphocytes. CD45 glycoprotein is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases. CD45 protein exists as multiple isoforms as a result of alternative splicing; these isoforms differ in their extracellular domains, whereas they share identical transmembrane and cytoplasmic domains. These isoforms differ in their ability to translocate into the glycosphingolipid-enriched membrane domains and their expression depends on cell type and physiological state of the cell. Besides the role in immunoreceptor signaling, CD45 is important in promoting cell survival by modulating integrin-mediated signal transduction pathway and is also involved in DNA fragmentation during apoptosis.

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

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz

References:

*Byth KF, Conroy LA, Howlett S, Smith AJ, May J, Alexander DR, Holmes N: CD45-null transgenic mice reveal a positive regulatory role for CD45 in early thymocyte development, in the selection of CD4+CD8+ thymocytes, and B cell maturation. J Exp Med. 1996 Apr 1;183(4):1707-18.

*Townsend KP, Vendrame M, Ehrhart J, Faza B, Zeng J, Town T, Tan J: CD45 isoform RB as a molecular target to oppose lipopolysaccharide-induced microglial activation in mice. Neurosci Lett. 2004 May 13;362(1):26-30.

*Dawes R, Petrova S, Liu Z, Wraith D, Beverley PC, Tchilian EZ. Combinations of CD45 isoforms are crucial for immune function and disease. J Immunol. 2006 Mar 15;176(6):3417-25.

*Desharnais P, Dupéré-Minier G, Hamelin C, Devine P, Bernier J: Involvement of CD45 in DNA fragmentation in apoptosis induced by mitochondrial perturbing agents. Apoptosis. 2007 Dec 19.

*Shen KY, Song YC, Chen IH, Chong P, Liu SJ: Depletion of tumor-associated macrophages enhances the anti-tumor immunity induced by a Toll-like receptor agonist-conjugated peptide. Hum Vaccin Immunother. 2014;10(11):3241-50.

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz