

Monoclonal Antibody to CD45 / LCA (CD45RB) - Purified

Alternate names:	L-CA, Leukocyte common antigen, PTPRC, Receptor-type tyrosine-protein phosphatase C, T200
Catalog No.:	SM3154P
Quantity:	0.1 mg
Concentration:	1.0 mg/ml
Background:	CD45RB is an of a receptor-type protein tyrosine phosphatase, CD45 glycoprotein. CD45 is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases, promotes cell survival by modulating integrin-mediated signal transduction pathway and is also involved in DNA fragmentation during apoptosis. CD45 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. CD45RB is expressed e.g. in microglia and inflammatory cells.
Uniprot ID:	P08575
NCBI:	NP_002829.2
GeneID:	5788
Host / Isotype:	Mouse / IgG1
Clone:	MEM-143
Immunogen:	Human peripheral blood lymphocytes
Format:	State: Liquid Ig fraction Purification: Protein-A affinity chromatography; purity: > 95% (by SDS-PAGE) Buffer System: Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Applications:	Flow cytometry: 4 µg/ml (The staining pattern of the MEM-143 shows prominent differences from other anti-CD45RB reagents including standard antibody MEM-55, mostly as a result of the recognition of differences in glycosylation). Immunohistochemistry on paraffin sections: 10 µg/ml. <i>Positive control:</i> human tonsil. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	The antibody reacts with a protein determinant of CD45RB, a 180-240 kDa single chain type I membrane glycoprotein, variant of CD45 (CD45RB isoform). CD45RB is expressed on a subset of T lymphocytes, B lymphocytes, monocytes, macrophages, granulocytes and dendritic cells. The MEM-143 clone is therefore not neuraminidase sensitive like most other anti-CD45RB antibodies. The reactivity of the antibody MEM-143 clone can be blocked by a peptide

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

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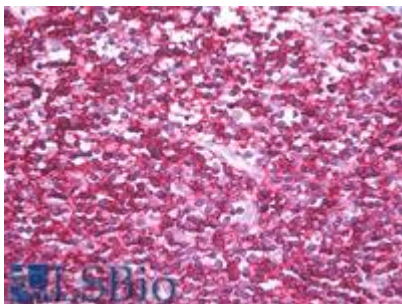
including amino acids 79-88.

Species Reactivity: **Tested:** Human

Storage: Store the antibody at 2 - 8 °C up to one month or (in aliquots) at -20 °C for longer. Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

- General References:**
1. 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.
 2. Li FJ, Tsuyama N, Ishikawa H, Obata M, Abroun S, Liu S, Otsuyama K, Zheng X, Ma Z, Maki Y, Kawano MM: A rapid translocation of CD45RO but not CD45RA to lipid rafts in IL-6-induced proliferation in myeloma. *Blood.* 2005 Apr 15;105(8):3295-302.
 3. Cosenza-Nashat MA, Kim MO, Zhao ML, Suh HS, Lee SC: CD45 isoform expression in microglia and inflammatory cells in HIV-1 encephalitis. *Brain Pathol.* 2006 Oct;16(4):256-65.
 4. 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.
 5. Bijian K, Zhang L, Shen SH: Collagen-mediated survival signaling is modulated by CD45 in Jurkat T cells. *Mol Immunol.* 2007 Jul;44(15):3682-90.
 6. 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.
 7. Koethe S, Zander L, Köster S, Annan A, Ebenfelt A, Spencer J, Bemark M: Pivotal advance: CD45RB glycosylation is specifically regulated during human peripheral B cell differentiation. *J Leukoc Biol.* 2011 Jul;90(1):5-19.

Pictures:



Immunohistochemistry staining of human tonsil (paraffin sections) using anti-CD45RB (clone MEM-143).

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