

Monoclonal Antibody to CD45 / LCA (CD45RA) - Purified

Alternate names:	L-CA, Leukocyte common antigen, PTPRC, Receptor-type tyrosine-protein phosphatase C, T200
Catalog No.:	SM1115P
Quantity:	0.1 mg
Concentration:	1.0 mg/ml
Background:	<p>CD45RA is a high molecular weight isoform 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. CD45RA is expressed e.g. on nave T cells and normal plasma cells.</p>
Uniprot ID:	P08575
NCBI:	NP_002829.2
GeneID:	5788
Host / Isotype:	Mouse / IgG2b
Clone:	MEM-56
Immunogen:	Human thymocytes and T 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_ 1-4 µg/ml. Immunoprecipitation. Western Blot. Immunohistochemistry (paraffin sections). No pre-treatment of tissue sections is essential. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	The antibody reacts with CD45RA, a 205-220 kDa single chain type I glycoprotein, variant of CD45 (CD45RA isoform). CD45RA is expressed on most of B lymphocytes, resting and native T lymphocytes, medullar thymocytes and monocytes.
Species Reactivity:	Tested: Human

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

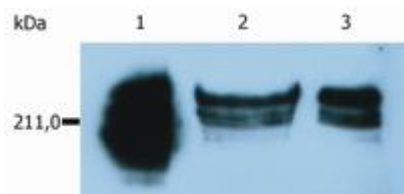
Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com

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. 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.
 2. 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.
 3. 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.
 4. 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.
 5. 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.
 6. Bazil V, Stefanova I, Hilgert I, Kristofova H, Vanek S, Bukovsky A, Horejsi V.: Monoclonal antibodies against human leucocyte antigens. III. Antibodies against CD45R, CD6, CD44 and two newly described broadly expressed glycoproteins MEM-53 and MEM-102. *Folia Biol (Praha)*. 1989;35(5):289-97.
 7. Leukocyte Typing IV., Knapp W. et al. (Eds.), Oxford University Press (1989).

Pictures:



Western Blotting analysis of whole cell lysate of HUT-78 human cutaneous T cell lymphoma cell line. Lane 1: immunostaining with anti-human CD45 control antibody. Lane 2: immunostaining with anti-human CD45RA (MEM-56); sample of cell lysate prepared under non-reducing conditions. Lane 3: immunostaining with anti-human CD45RA (MEM-56); sample of cell lysate prepared under reducing conditions.

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