

Monoclonal Antibody to CD45 / LCA (CD45R) - Purified

Alternate names:	L-CA, Leukocyte common antigen, PTPRC, Receptor-type tyrosine-protein phosphatase C, T200
Catalog No.:	SM034PT
Quantity:	25 µg
Concentration:	1.0 mg/ml
Background:	CD45R is a member of the protein tyrosine phosphatase (PTP) family and a major cell surface glycoprotein. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. CD45R represents a restricted form of the CD45 family which primarily recognizes only cells of B lineage from proB cell through mature B lymphocytes and, prior to the availability of anti CD19 MAbs, was commonly used as a pan B cell marker. It also reacts with certain activated T cells, as well as non MHC restricted lytically active lymphokine activated killer (LAK) cells. CD45R contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains. It is specifically expressed in hematopoietic cells and has been shown to be an essential regulator of T and B cell antigen receptor signaling. It functions through either direct interaction with components of the antigen receptor complexes, or by activating various Src family kinases required for the antigen receptor signaling. CD45R also suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling. Four alternatively spliced transcripts variants of this gene, which encode distinct isoforms, have been reported.
Uniprot ID:	P06800
NCBI:	10090
Host / Isotype:	Rat / IgG2a
Clone:	RA3-6B2
Immunogen:	Mouse pre-B tumour cells (RAW112). Spleen cells from immunised Lewis rats were fused with cells of the rat S194/5 XX0.BU-1 myeloma cell line.
Format:	State: Liquid purified IgG fraction. Purification: Affinity Chromatography on Protein G. Buffer System: PBS, pH 7.4 containing 0.09% Sodium Azide as preservative.
Applications:	Flow Cytometry: Use 10 µl of 1/100-1/200 diluted antibody to label 10e6 cells in 100 µl. Immunoprecipitation. Immunohistochemistry on Frozen and Paraffin Sections (PLP fixed tissue-See Ref.3). Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

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

Specificity:

This antibody reacts with CD45R a form of the CD45 antigen expressed by B cells and lytically active subsets of NK cells and non-MHC restricted CTLs.

Clone RA3-6B2 immunoprecipitates the high molecular weight form of CD45 (220kD).

Species: Human, Mouse and Cat.

Other species not tested.

Storage:

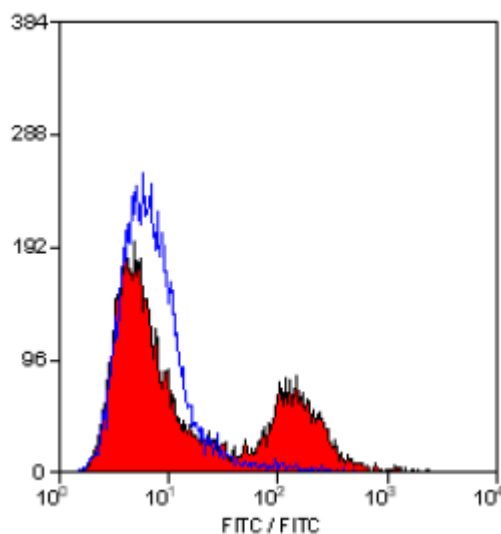
Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General References:

1. Coffman, R. (1982) Surface antigen expression and immunoglobulin gene rearrangement during mouse pre-B cell development. *Immunol. Rev.* 69: 5-23.
2. Rosmalen, J.G.M. et al. (2000) Subsets of macrophages and dendritic cells in nonobese diabetic mouse pancreatic inflammatory infiltrates: correlation with the development of diabetes. *Lab. Invest.* 80: 23-30.
3. Whiteland, J.L. et al. (1995) Immunohistochemical detection of T-Cell subsets and other leucocytes in paraffin-embedded rat and mouse tissues with monoclonal antibodies. *J. Histochem. Cytochem.* 43: 313-320.
4. Spangrude, G.J. et al. (1988) Purification and characterization of mouse hematopoietic stem cells. *Science.* 241: 58-62.
5. Spangrude, G.J. et al. (1988) Two rare populations of mouse Thy-1lo bone marrow cells repopulate the thymus. *J. Exp. Med.* 167: 1671-1683.
6. Holmes, K.L. et al. (1986) Analysis of neoplasms induced by Cas-Br-M MuLV tumor extracts. *J. Immunol.* 137: 679-688.
7. Monteith, C.E. et al. (1996) Identification of monoclonal antibodies for immunohistochemical staining of feline B lymphocytes in frozen and formalin fixed paraffin embedded tissues. *Can. J. Vet. Res.* 60: 193-198.
8. Lundqvist, J. et al. (2010) Concomitant infection decreases the malaria burden but escalates relapsing fever borreliosis. *Infect. Immun.* 78:1924-1930.
9. Herrmann, I. et al. (2006) Streptococcus pneumoniae Infection aggravates experimental autoimmune encephalomyelitis via Toll-like receptor 2. *Infect Immun.* 74: 4841-8.
10. Kleiter, I. et al. (2010) Smad7 in T cells drives T helper 1 responses in multiple sclerosis and experimental autoimmune encephalomyelitis. *Brain.* 133: 1067-81.
11. Lacroix-Lamande, S. et al. (2009) Neonate intestinal immune response to CpG oligodeoxynucleotide stimulation. *PLoS One.* 4: e8291.
12. Bertilaccio, M.T. et al. (2011) Lack of TIR8/SIGIRR triggers progression of chronic lymphocytic leukemia in mouse models. *Blood.* 118: 660-9.

Pictures:

Staining of mouse spleen cells with Rat Anti Mouse CD45R antibody.

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