

CD45 Monoclonal Antibody (OX-1)

Catalog NumberMA1-81566

Product data sheet

Details		Species Reactivity	
Size	100 µg	Species reactivity	Rat
Host/Isotope	Mouse / IgG1	Tested Applications	
Class	Monoclonal	Flow Cytometry (Flow)	Dilution *1:100
Type	Antibody	Immunohistochemistry (Frozen) (IHC (F))	Assay-dependent
Clone	OX-1	Immunocytochemistry (ICC/IF)	Assay-dependent
Immunogen	Rat thymocyte membrane glycoproteins.	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Conjugate	Unconjugated		
Form	Liquid		
Concentration	1 mg/mL		
Purification	Protein G		
Storage buffer	PBS		
Contains	0.09% sodium azide		
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

Product specific information

For FACS analysis, use 10 µL of the suggested working dilution to label 1x10⁶ cells in 100 µL. Mouse anti Rat CD45 antibody, clone OX-1 recognizes CD45, also known as the leucocyte common antigen (LCA).

Background/Target Information

CD45 (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase (PTP) ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10% of all surface proteins in lymphocytes. CD45 is absent on non-hematopoietic cell lines, normal and malignant, non-hematopoietic tissues. 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, differ in their extracellular domains but share identical transmembrane and cytoplasmic domains. CD45RA is an isoform of the CD45 complex and has restricted expression between different subtypes of lymphoid cells. CD45 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. CD45 has been shown to be an essential regulator of T- and B-cell antigen receptor signaling and suppresses JAK kinases to regulate cytokine receptor signaling. CD45 is also important in promoting cell survival by modulating integrin-mediated signal transduction pathway, DNA fragmentation during apoptosis and inhibition or upregulation of various immunological functions.

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