

ARG22926 anti-CD45 antibody [IBL-3/16]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Rat Monoclonal antibody [IBL-3/16] recognizes CD45 Rat anti Mouse CD45 antibody, clone IBL-3/16 recognizes murine Receptor-type tyrosine-protein phosphatase C, also known as CD45, Leukocyte common antigen, T200 or Lymphocyte antigen 5 (Ly5). CD45 is a 1291 amino acid ~175kDa single pass type I transmembrane glycoprotein belonging to the protein-tyrosine phosphatase family. CD45 has two fibronectin type-III domains and two tyrosine protein phosphatase domains (UniProt: P06800). Multiple isoforms are generated by alternative splicing with isoforms having differing deletions in the N-terminal region (Saga et al. 1987). Rat anti Mouse CD45 antibody, clone IBL-3/16 is expected to recognize all isoforms of murine CD45. Rat anti Mouse CD45 antibody, clone IBL-3/16 has been used successfully for the identification of CD45 in murine samples using Immunohistochemical (both cryo and FFPE), immunofluorescence and western blotting techniques (Kondo et al. 2011, Cuadros et al. 2006).
Tested Reactivity	Ms
Species Does Not React With	Hu, Rat, Chk
Tested Application	FACS, ICC/IF, IHC-Fr, IP
Host	Rat
Clonality	Monoclonal
Clone	IBL-3/16
Isotype	IgG1
Target Name	CD45
Species	Mouse
Immunogen	Purified B cells from Mouse lymph nodes.
Conjugation	Un-conjugated
Alternate Names	LY5; GP180; Receptor-type tyrosine-protein phosphatase C; CD45; L-CA; CD antigen CD45; Leukocyte common antigen; CD45R; LCA; T200; EC 3.1.3.48; B220

Application Instructions

Application table	Application	Dilution
	FACS	1:50 - 1:100
	ICC/IF	Assay-dependent
	IHC-Fr	1:50 - 1:100
	IP	Assay-dependent
Application Note	<p>IHC-Fr: The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Arigo recommends the use of acetone fixation for frozen sections.</p> <p>FACS: Use 10 µl of the suggested working dilution to label 10⁶ cells in 100 µl.</p> <p>* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.</p>	

Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS, 0.09% Sodium azide and 0.1% BSA
Preservative	0.09% Sodium azide
Stabilizer	0.1% BSA
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	Ptpnc
Gene Full Name	protein tyrosine phosphatase, receptor type, C
Background	CD45 is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitosis, and oncogenic transformation. This PTP contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains, and thus is classified as a receptor type PTP. This PTP 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. This PTP also suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling. Alternatively spliced transcripts variants of this gene, which encode distinct isoforms, have been reported. [provided by RefSeq, Jun 2012]
Function	<p>CD45: Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor. Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN. Dephosphorylates LYN, and thereby modulates LYN activity.</p> <p>(Microbial infection) Acts as a receptor for human cytomegalovirus protein UL11 and mediates binding of UL11 to T-cells, leading to reduced induction of tyrosine phosphorylation of multiple signaling proteins upon T-cell receptor stimulation and impaired T-cell proliferation. [UniProt]</p>
Research Area	Developmental Biology antibody; Immune System antibody; Neuroscience antibody; Signaling Transduction antibody; Mouse Inflammatory Cell Marker antibody; B Cell Marker antibody
Calculated Mw	147 kDa
PTM	Heavily N- and O-glycosylated.