ARG22752
anti-CD45RO antibody [IL-A116]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [IL-A116] recognizes CD45RO This antibody recognizes Bovine homologue of the Human CD45RO cell surface antigen. CD45, also known as Leucocyte Common Antigen or LCA, occurs in a number of isoforms, clone IL-A116 is specific for the low molecular weight isoform termed CD45RO, the isoform associated with expression on memory T-cells. Bovine CD45RO is expressed by monocytes, granulocytes and subsets of thymocytes, CD4+ T cells and CD8+ T cells. Studies utilizing clone IL-A116 have demonstrated that the percentage of CD45RO+ CD8+ T cells increase from approximately 5% in neonatal calves to approximately 35% in adult cattle over the age of 5 years (Hogg et al. 2011). It has been demonstrated that mouse anti Bovine CD45RO, clone IL-A116 immunoprecipitates a molecule of 180kDa (Bembridge et al 1995) which is analogus to the molecular weight of Human and mouse CD45RO. Clone IL-A116 has been demonstrated to recognise the CD45RO cell surface antigen by flow cytometry in both European cattle, Bos taurus, and in Zebu, B. Indicus (Bembridge et al 1995).
Tested Reactivity	Bov, Goat
Tested Application	FACS, IP
Host	Mouse
Clonality	Monoclonal
Clone	IL-A116
Isotype	IgG3
Target Name	CD45RO
Species	Bovine
Immunogen	Bovine peripheral blood monouclear cells.
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	1:10 - 1:50
IP	Assay-dependent

Application Note: FACS: Use 10 µl of the suggested working dilution to label 10^6 cells in 100 µl.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

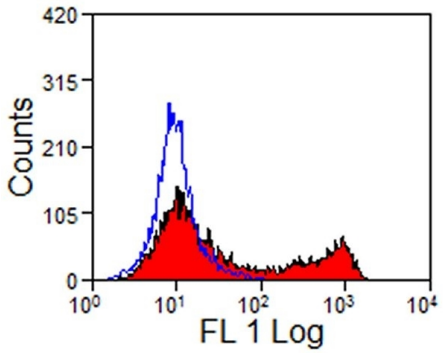
Form	Liquid

Purification	Purification with Protein A.
Buffer	PBS and 0.09% Sodium azide.
Preservative	0.09% Sodium azide
Concentration	1 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	PTPRC
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	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. (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]
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.

Images



ARG22752 anti-CD45RO antibody [IL-A116] FACS image

Flow Cytometry: Bovine peripheral blood lymphocytes stained with ARG22752 anti-CD45RO antibody [IL-A116] followed by Goat anti-Mouse IgG (FITC).