

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD45RB in direct ELISA.
Source	Monoclonal Mouse IgG ₁ Clone # 1067419
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived human CD45RB Gln26-Lys463 Accession # P08575
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Immunohistochemistry Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CD45, previously called LCA (leukocyte common antigen), T200, or Ly5 in mice, is member C of the class 1 (receptor-like) protein tyrosine phosphatase family (PTPRC) (1, 2). It is a variably glycosylated 180-220 kDa transmembrane protein that is abundantly expressed on all nucleated cells of hematopoietic origin (1-3). Multiple splicing isoforms of exon 4 (A), 5 (B), and 6 (C) are expressed according to cell type, developmental stage and antigenic exposure (1-5). The longest form, CD45RABC (called B220 in mouse) is expressed on B lymphocytes and the shortest form, CD45R0 is expressed on memory cells (5). Isoform CD45RB contains exon 5 (B exon) in the extracellular domain, which shares 41% and 40% homology with the ECD of mouse and rat CD45RB. CD45 has been best studied in T cells, where it determines T cell receptor signaling thresholds (3, 6-8). CD45 is moved into or out of the immunological synapse (IS) membrane microdomain depending on the relative influence of interaction with the extracellular galectin lattice or the intracellular actin cytoskeleton (9, 10). Interaction of galectin can be fine-tuned by varying usage of the heavily O-glycosylated spliced regions and sialylation of N-linked carbohydrates of CD45 (4, 9). Within the immunological synapse, CD45 dephosphorylates and negatively regulates the Src family kinase, Lck (8-10). In other leukocytes, CD45 influences differentiation and links immunoreceptor signaling with cytokine secretion and cell survival, partially overlapping in function with DEP-1/CD148 (11-14). CD45 deletion causes severe immunodeficiency, while point mutations may be associated with autoimmune disorders (6, 7).

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