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| **Product name:** | CD45 Rabbit Polyclonal Antibody |
| **Cat number:** | ABN08403 |
| **Conjugate:** | Unconjugated |
| **Size:** | 100µL |
| **Clone:** | Polyclonal |
| **Concentration:** | 1mg/ml |
| **Host:** | Rabbit |
| **Isotype:** | IgG |
| **Immunogen:** | The antiserum was produced against synthesized peptide derived from human CD45. AA range:981-1030 |
| **Reactivity:** | Human,Mouse,Rat |
| **Applications:** | WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:100-1:300,ELISA 1:10000-1:20000 |
| **Purification:** | Affinity purification |
| **Form:** | Liquid |
| **Buffer:** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N. |
| **Storage:** | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles. |

**Background:**

The protein encoded by this gene 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 encalternative products:At least 8 isoforms are produced,catalytic activity:Protein tyrosine phosphate + H(2)O = protein tyrosine + phosphate.,disease:Defects in PTPRC are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive (T(-)B(+)NK(+)SCID) [MIM:608971]. SCID refers to a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients with SCID present in infancy with recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell-mediated cellular immunity due to a defect in T-cell development.,disease:Genetic variations in PTPRC are involved in multiple sclerosis susceptibility (MS) [MIM:126200]. MS is a neurodegenerative disorder characterized by the gradual accumulation of focal plaques of demyelination particularly in the periventricular areas of the brain. Peripheral nerves are not affected. Onset usually in third or fourth decade with intermittent progression over an extended period. The cause is still uncertain.,domain:The first PTPase domain interacts with SKAP1.,function:Required for T-cell activation through the antigen receptor. 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 an dephosphorylates SKAP1 and FYN.,online information:CD45 entry,online information:PTPRC mutation db,PTM:Heavily N- and O-glycosylated.,similarity:Belongs to the protein-tyrosine phosphatase family. Receptor class 1/6 subfamily.,similarity:Contains 2 fibronectin type-III domains.,similarity:Contains 2 tyrosine-protein phosphatase domains.,subunit:Binds GANAB and PRKCSH (By similarity). Interacts with SKAP1.,