

Product Name: CD45 Rabbit Polyclonal Antibody
Catalog #: APRab08403



Summary

Production Name	CD45 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	IF,IHC,WB,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	PTPRC
Alternative Names	PTPRC; CD45; Receptor-type tyrosine-protein phosphatase C; Leukocyte common antigen; L-CA; T200; CD antigen CD45
Gene ID	5788.0
SwissProt ID	P08575.The antiserum was produced against synthesized peptide derived from human CD45. AA range:981-1030

Application

Dilution Ratio	WB 1:500 - 1:2000. IHC-p: 1:100-300 ELISA: 1:20000. IF 1:100-300 Not yet tested in other applications.
Molecular Weight	

Background

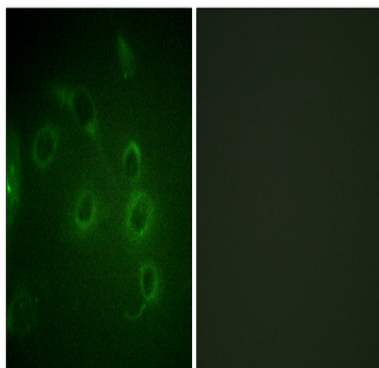
The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitosis, and oncogenic transformation. This PTP contains an extracellular domain, 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 encode alternative products: At least 8 isoforms are produced, catalytic activity: Protein tyrosine phosphate + H₂O = 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 and 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.,

Research Area

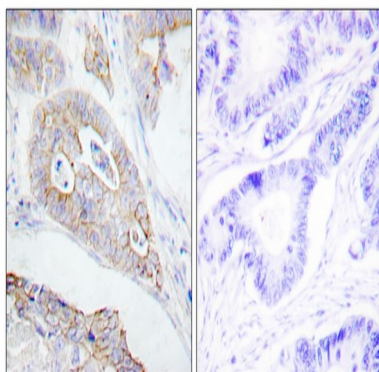
Cell adhesion molecules (CAMs); T_Cell_Receptor; Fc gamma R-mediated phagocytosis; Primary immunodeficiency;

Image Data

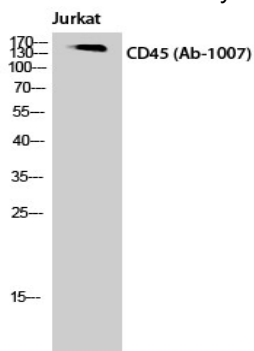
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Immunofluorescence analysis of HUVEC cells, using CD45 Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human colon carcinoma tissue, using CD45 Antibody. The picture on the right is blocked with the synthesized peptide.



Western Blot analysis of Jurkat cells using CD45 Polyclonal Antibody

Note

For research use only.