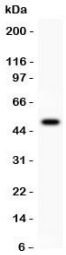
CD45 Antibody (R31522)

Catalog No.	Formulation	Size
R31522	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

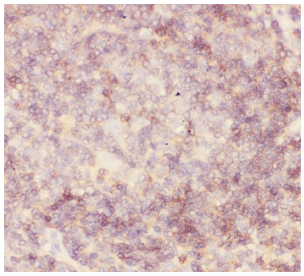
Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
Gene ID	5788
Localization	Cytoplasmic, membrane
Applications	Western Blot : 0.5-1ug/ml IHC (FFPE) : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells Immunofluorescence : 2-4ug/ml
Limitations	This CD45 antibody is available for research use only.

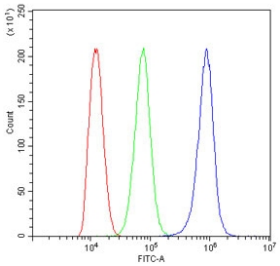
Western blot testing of CD45 antibody and Lane 1: Jurkat; 2: Raji lysate. Expected molecular weight: ~147/180-220 kDa (unmodified/glycosylated).



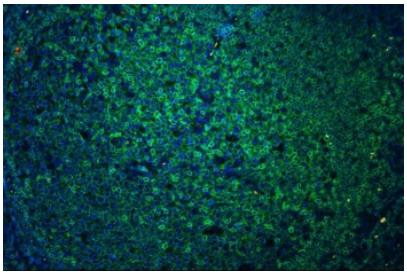
Western blot testing of CD45 antibody and recombinant human protein (0.5ng)



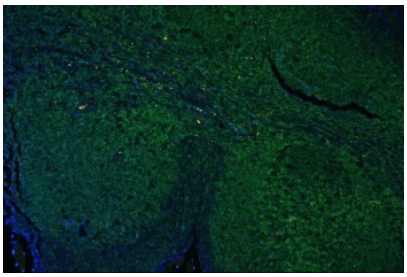
IHC-P: CD45 antibody testing of human tonsil tissue



Flow cytometry testing of human ThP-1 cells with CD45 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= CD45 antibody.



Immunofluorescent staining of FFPE human tonsil with CD45 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



Immunofluorescent staining of FFPE human tonsil with CD45 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.

Description

Cluster of Differentiation 45, also known as PTPRC, LCA or CD45R, is an enzyme that, in humans, is encoded by the PTPRC gene. It is a member of the protein tyrosine phosphatase (PTP) family. CD45 is a major high molecular mass leukocyte cell surface molecule which is also an integral membrane protein tyrosine phosphatase. Targeted disruption of the gene leads to enhanced cytokine and interferon receptor-mediated activation of JAKs and STAT proteins. In vitro, CD45 directly dephosphorylates and binds to JAKs. Functionally, it negatively regulates interleukin-3-mediated cellular proliferation, erythropoietin-dependent hematopoiesis, and antiviral responses in vitro and in vivo. It has been best studied in T cells, where it determines T cell receptor signaling thresholds. 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. Galectin interaction can be fine-tuned by varying usage of the heavily Oglycosylated spliced regions and sialylation of N-linked carbohydrates.

CD45 is encoded by PTPRC and functions as a key regulator of leukocyte signaling and hematopoietic cell biology; additional reagents targeting this protein are available on the CD45 Antibody page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the CD45 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 1113-1304) was used as the immunogen for this CD45 antibody.

Storage

After reconstitution, the CD45 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.