Product datasheet

Anti-CD45/PTPRC Antibody (Clone#3H6)

Catalog Number: *M00555-6*

BOSTER
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Basic Information

Product Name	Anti-CD45/PTPRC Antibody (Clone#3H6)
Gene Name	PTPRC
Source	Mouse
Clonality	Monoclonal
Isotype	IgG1
Species Reactivity	human
Tested Application	WB, IHC, IF, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CD45, different from the related mouse sequence by eight amino acids, and from the related rat sequence by ten amino acids.
Concentration	500 ug/ml
Purification	protein G purified.
Observed MW	180-250 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunofluorescence (IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied.

Background Information

CD45 (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. The cytogenetic location of CD45 is 1q31.3-q32.1. This gene is especially a prototype for transmembrane protein-tyrosine phosphatase (PTP). Targeted disruption of the CD45 gene leads to enhanced cytokine and interferon receptor-mediated activation of

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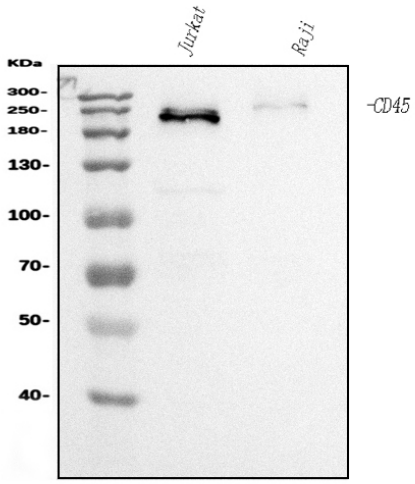
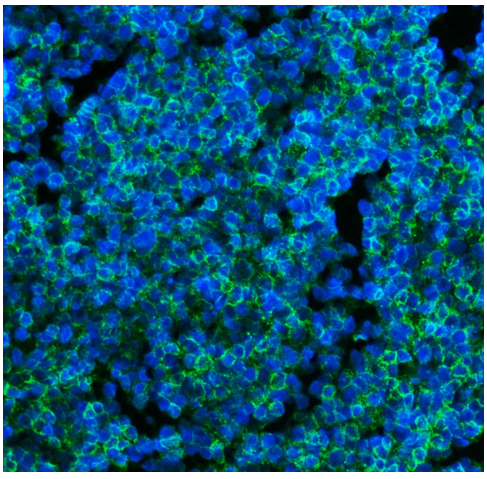
JAKs and STAT proteins. In vitro, CD45 directly dephosphorylates and binds to JAKs. Functionally, CD45 negatively regulates interleukin-3-mediated cellular proliferation, erythropoietin-dependent hematopoiesis, and antiviral responses in vitro and in vivo. In addition, CD45 has been best studied in T 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 finetuned by varying usage of the heavily Oglycosylated spliced regions and sialylation of Nlinked carbohydrates.

Selected Validation Data



Western blot analysis of CD45/PTPRC using anti-CD45/PTPRC antibody (M00555-6). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: Jurkat tissue lysates,
Lane 2: Raji tissue lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-CD45/PTPRC antigen affinity purified monoclonal antibody (M00555-6) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for CD45/PTPRC at approximately 180-250 kDa. The expected band size for CD45/PTPRC is at 147 kDa.



IF analysis using anti- CD45/PTPRC Antibody (M00555-6). detected in paraffin-embedded section of human tonsli tissues. The tissue section were stained using the Fluoro488 conjugated Anti-mouse IgG Secondary Antibody ((green)(Catalog # BA1126) and counterstained with DAPI (blue).

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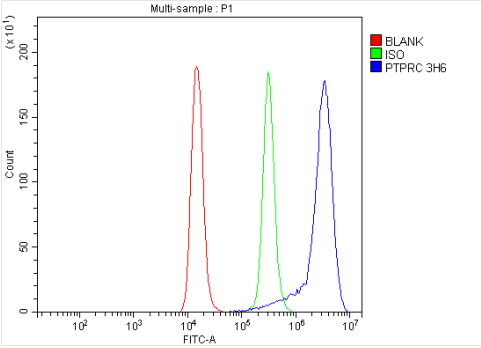

Flow Cytometry analysis of Raji cells using anti-CD45/PTPRC antibody (M00555-6).

Overlay histogram showing Raji cells stained with M00555-6 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with mouse anti-CD45/PTPRC Antibody (M00555-6) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.