10320 Camino Santa Fe, Suite G
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CD45 FITC Monoclonal Antibody (Clone HI30)

Mouse Monoclonal Antibody
Catalog # ABV11475

Specification

CD45 FITC Monoclonal Antibody (Clone HI30) - Product Information

Application	**FC**
Primary Accession	P08575
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1, Kappa**

CD45 FITC Monoclonal Antibody (Clone HI30) - Additional Information

Gene ID 5788

Positive Control	**FACS: Human peripheral blood lymphocytes**
Application & Usage	**Flow (Cell Surface): 5 µl/1x10^6 cells, Volume per test: 5 µl (0.25 µg).**

Other Names
CD45

Target/Specificity
CD45

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
Phosphate-buffered aqueous solution pH 7.2, ≤0.09% Sodium azide, may contain carrier protein/stabilizer.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
4°C

Background Descriptions

Precautions
CD45 FITC Monoclonal Antibody (Clone HI30) is for research use only and not for use in diagnostic or therapeutic procedures.

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CD45 FITC Monoclonal Antibody (Clone HI30) - Protein Information

Name PTPRC (HGNC:9666)

Synonyms CD45

Function
Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor. Acts as a positive regulator of T-cell coactivation upon binding to DPP4. 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. Dephosphorylates LYN, and thereby modulates LYN activity (By similarity).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Membrane raft Note=Colocalized with DPP4 in membrane rafts

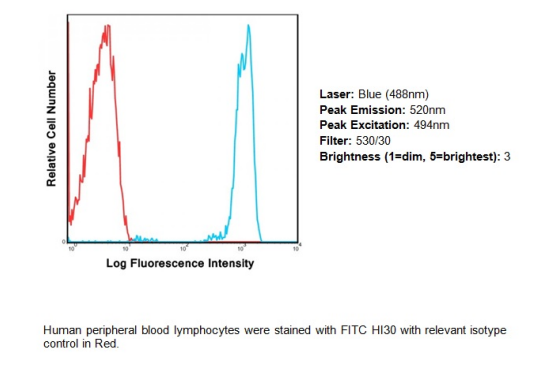
Tissue Location
Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes Isoform 8: Not detected in thymocytes.

CD45 FITC Monoclonal Antibody (Clone HI30) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD45 FITC Monoclonal Antibody (Clone HI30) - Images



Human peripheral blood lymphocytes were stained with FITC HI30 with relevant isotype control in Red.

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CD45 FITC Monoclonal Antibody (Clone HI30) - Background

CD45, a transmembrane multifunctional glycoprotein, is a member of Type I receptor-linked PTPase family and is expressed as multiple isoforms due to alternative splicing. Expression of these isoforms is highly regulated and shift in this expression determines T-cell activation. CD45RB consists of exon B and is predominantly expressed in naïve T-cells secreting IL-2. Its expression is low in primed/memory T cells, cells that express Th2 cytokines such as IL-4 and IL-10 and population of T-cells with regulatory function. Immunotherapy with CD45RB antibody is being widely studied in transplantation and vaccination. CD45 antibodies are commonly used to identify tumors of lymphoid origin. The HI130 monoclonal antibody specifically reacts with the 180 kDa, 190 kDa, 205 kDa, and 220 kDa isoforms of the human leukocyte common antigen (LCA) CD45. It is expressed on lymphocytes, granulocytes, monocytes, thymocytes, and eosinophils, but not on mature erythrocytes, platelets, mature erythroid cells of bone marrow, and non-hematopoietic tissues. CD45 is essential for T cell activation and the tyrosine phosphatase activity of its intracellular region is integral for signal transduction.