Datasheet for ABIN775710

anti-CD45 antibody

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Overview

Quantity:	100 µg
Target:	CD45 (PTPRC)
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD45 antibody is un-conjugated
Application:	Flow Cytometry (FACS), Western Blotting (WB), Immunoprecipitation (IP), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunohistochemistry (Frozen Sections) (IHC (fro)), Immunocytochemistry (ICC)

Product Details

Purpose:	Anti-Hu CD45 Purified
Immunogen:	human peripheral blood leukocytes
Clone:	HI30
Isotype:	IgG1 kappa
Specificity:	The mouse monoclonal antibody HI30 recognizes an extracellular epitope on all isoforms of human CD45 antigen (Leukocyte Common Antigen), a 180-220 kDa single chain type I transmembrane protein expressed at high level on all cells of hematopoietic origin, except erythrocytes and platelets.
Cross-Reactivity (Details):	Human, Non-Human Primates
Purification:	Purified by protein-G affinity chromatography.

Product Details

Purity:	> 95 % (by SDS-PAGE)

Target Details

Target:	CD45 (PTPRC)
Alternative Name:	CD45 (PTPRC Products)
Background:	Protein tyrosine phosphatase receptor type C,CD45 (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10 % of all surface proteins in lymphocytes. CD45 glycoprotein is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases. CD45 protein exists as multiple isoforms as a result of alternative splicing, these isoforms differ in their extracellular domains, whereas they share identical transmembrane and cytoplasmic domains. These isoforms differ in their ability to translocate into the glycosphingolipid-enriched membrane domains and their expression depends on cell type and physiological state of the cell. Besides the role in immunoreceptor signaling, CD45 is important in promoting cell survival by modulating integrin-mediated signal transduction pathway and is also involved in DNA fragmentation during apoptosis.,LCA, T200, LY5, B220, GP180, TPC
Gene ID:	5788
UniProt:	P08575
Pathways:	TCR Signaling, Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process, Production of Molecular Mediator of Immune Response, CXCR4-mediated Signaling Events, BCR Signaling

Application Details

Application Notes:	Western blotting: non-reducing conditions, recommended dilution: 1 µg/mL, 6-7 % gel recommended (band around 180-250 kDa). Flow cytometry: Recommended dilution: 1-4 µg/mL
Restrictions:	For Research Use only

Handling

Concentration:	1 mg/mL
Buffer:	Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide

Handling

Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	**Do not freeze.**
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Do not freeze.

Publications

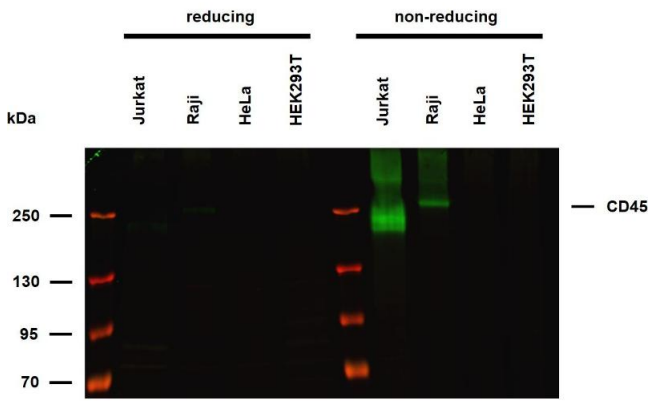
Product cited in:

Song, Ara, Wu, Woo, Reynolds, Seeger, DeClerck, Thiele, Sposto, Metelitsa: "Oncogene MYCN regulates localization of NKT cells to the site of disease in neuroblastoma." in: **The Journal of clinical investigation**, Vol. 117, Issue 9, pp. 2702-12, (2007) (PubMed).

Leone, Rutella, Bonanno, Abbate, Rebuzzi, Giovannini, Lombardi, Galiuto, Liuzzo, Andreotti, Lanza, Contemi, Leone, Crea: "Mobilization of bone marrow-derived stem cells after myocardial infarction and left ventricular function." in: **European heart journal**, Vol. 26, Issue 12, pp. 1196-204, (2005) (PubMed).

Yamada, Zhu, Saxon, Zhang: "CD45 controls interleukin-4-mediated IgE class switch recombination in human B cells through its function as a Janus kinase phosphatase." in: **The Journal of biological chemistry**, Vol. 277, Issue 32, pp. 28830-5, (2002) (PubMed).

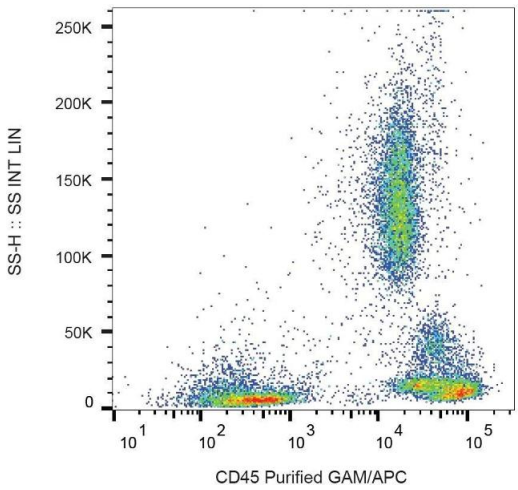
Images



Western Blotting

Image 1. Anti-Hu CD45 Purified (clone HI30) works in WB application under non-reducing conditions. Western blotting analysis was performed on whole cell extracts (RIPA lysis buffer) of Jurkat, Raji, HeLa, and HEK293T cell lines, mixed and heated (100 °C, 5 min) with reducing and non-reducing SDS-loading buffer. Samples were resolved using 7 % Tris-glycine SDS gel electrophoresis. Nitrocellulose membrane blot was probed with mouse IgG1 monoclonal antibody

HI30 (1 µg/mL), followed by IRDye 800CW Goat-anti-Mouse IgG (green). Multiplex fluorescent Western blot detection was performed. CD45 Molecules were detected at ~180-250 kDa in Jurkat and Raji cell lines.



Flow Cytometry

Image 2. Surface staining of human peripheral blood cells with anti-human CD45 (HI30) purified, GAM-APC.