Datasheet for ABIN3043913

anti-CD45 antibody (AA 1113-1304)

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Overview

Quantity:	100 µg
Target:	CD45 (PTPRC)
Binding Specificity:	AA 1113-1304
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CD45 antibody is un-conjugated
Application:	Flow Cytometry (FACS), Immunohistochemistry (IHC), Western Blotting (WB), Immunofluorescence (IF)

Product Details

Purpose:	Anti-CD45/PTPRC Antibody Picoband®
Immunogen:	E.coli-derived human CD45 recombinant protein (Position: R1113-S1304). Human CD45 shares 68% amino acid (aa) sequence identity with both mouse and rat CD45.
Isotype:	IgG
Cross-Reactivity (Details):	No cross-reactivity with other proteins
Characteristics:	Anti-CD45/PTPRC Antibody Picoband® (ABIN3043913). Tested in Flow Cytometry, IF, IHC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.

Product Details

Purification:	Immunogen affinity purified.

Target Details

Target:	CD45 (PTPRC)
Alternative Name:	PTPRC (PTPRC Products)
Background:	Synonyms: Receptor-type tyrosine-protein phosphatase C,3.1.3.48,Leukocyte common antigen,L-CA,T200,CD45,PTPRC,CD45, Tissue Specificity: Cell surface of thymocytes, T-lymphocytes, neutrophils, plasma cells and myelomas. Background: CD45 (Cluster of Differentiation 45), also known as PTPRC, LCA or CD45R, is an enzyme that, in humans, is encoded by the PTPRC gene. CD45 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 JAKs and STAT proteins. In vitro, CD45 ly 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. 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. Sequence Similarities: Belongs to the protein-tyrosine phosphatase family. Receptor class 1/6 subfamily.
Molecular Weight:	180-250 kDa
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 blot, 0.1-0.5 µg/mL, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/mL, Human Immunofluorescence, 2 µg/mL, Human Flow Cytometry (Fixed), 1-3 µg/1x10^6 cells, Human 1. Anderson, J.N. et al. (2004) FASEB J. 18:8. 2. Akao, Y., Utsumi, K. R., Naito, K., Ueda, R., Takahashi, T., Yamada, K. Chromosomal assignments of genes coding for human leukocyte common antigen, T-200, and lymphocyte function-associated antigen 1, LFA-1 beta subunit. Somat. Cell Molec. Genet. 13: 273-278, 1987. 3. Falahti, R. and D. Leitenberg (2008) J. Immunol. 181:6082.
Comment:	Antibody can be supported by chemiluminescence kit ABIN921124 in WB, supported by ABIN921231 in IHC(P).
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.
Concentration:	500 µg/mL
Buffer:	Each vial contains 5 mg BSA, 0.9 mg NaCl, 0.2 mg Na2HPO4, 0.05 mg Sodium azide.
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:	Avoid repeated freezing and thawing.
Storage:	4 °C,-20 °C
Storage Comment:	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.

Publications

Product cited in:	Tian, Tao, Zhao, Tai, Liu, Liu: "Isolation and morphological characterization of ovine amniotic fluid mesenchymal stem cells." in: **Experimental animals**, Vol. 65, Issue 2, pp. 125-34, (2017) (PubMed).

Publications

Huang, Chen, Wang, Wang, Ning, He, Hu, Yuan, Li, Wang, Liu, Chen, Ren, Sun: "Detecting cell-in-cell structures in human tumor samples by E-cadherin/CD68/CD45 triple staining." in: **Oncotarget**, Vol. 6, Issue 24, pp. 20278-87, (2016) (PubMed).

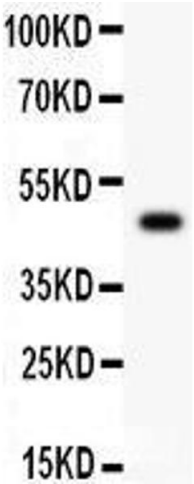
Yu, Zhang, Chen, Zhong, Cai, Hu, Yang, Zhang, Li, Ge, Yu, Liu, Zhuang: "Tetramethylpyrazine (TMP), an Active Ingredient of Chinese Herb Medicine Chuanxiong, Attenuates the Degeneration of Trabecular Meshwork through SDF-1/CXCR4 Axis." in: **PLoS ONE**, Vol. 10, Issue 8, pp. e0133055, (2016) (PubMed).

Zhang, Hu, Liu, Ye, Gui, Zhou, Qi, He, Wang, Wang: "CD11b deficiency suppresses intestinal tumor growth by reducing myeloid cell recruitment." in: **Scientific reports**, Vol. 5, pp. 15948, (2015) (PubMed).

Liu, Wang, Ye, Yin, Chen: "Distinct molecular basis for endothelial differentiation: gene expression profiles of human mesenchymal stem cells versus umbilical vein endothelial cells." in: **Cellular immunology**, Vol. 289, Issue 1-2, pp. 7-14, (2014) (PubMed).

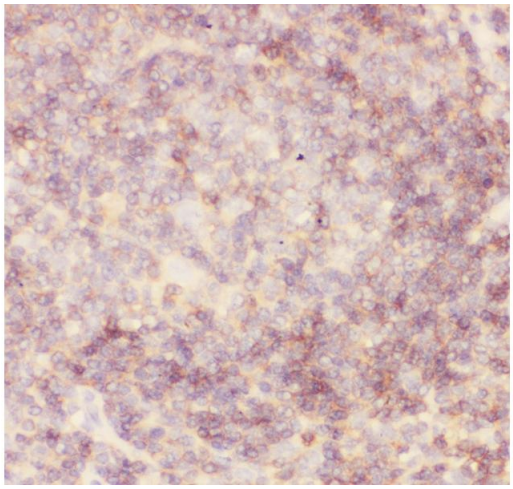
There are more publications referencing this product on: Product page

Images



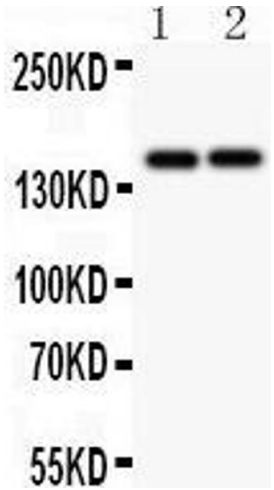
Western Blotting

Image 1. Anti-CD45 Picoband antibody, All lanes: Anti CD45 at 0.5ug/ml WB: Recombinant Human CD45 Protein 0.5ng Predicted bind size: 47KD Observed bind size: 47KD



Immunohistochemistry

Image 2. Anti-CD45 Picoband antibody, IHC(P): Human Tonsil Tissue



Western Blotting

Image 3. Anti-CD45 Picoband antibody, All lanes: Anti CD45 at 0.5ug/ml Lane 1: JURKAT Whole Cell Lysate at 40ug Lane 2: RAJI Whole Cell Lysate at 40ug Predicted bind size: 147KD Observed bind size: 147KD