

Datasheet for ABIN967867
anti-CD45 antibody (AA 535-730)



[Go to Product page](#)

2 Images

5 Publications

Overview

Quantity:	50 µg
Target:	CD45 (PTPRC)
Binding Specificity:	AA 535-730
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD45 antibody is un-conjugated
Application:	Immunohistochemistry (IHC), Western Blotting (WB), Immunofluorescence (IF), Immunoprecipitation (IP)

Product Details

Immunogen:	Human CD45 aa. 535-730 (alternatively spliced)
Clone:	69-CD45
Isotype:	IgG1
Cross-Reactivity:	Mouse (Murine), Rat (Rattus)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

Product Details

Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
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Target Details

Target:	CD45 (PTPRC)
Alternative Name:	CD45 (Ly-5) (PTPRC Products)
Background:	CD45 (also known as leukocyte common antigen, GP180, or T200) is found on all hematopoietic cells except those of red cell origin. The N-terminal domain is a large glycosylated extracellular region of variable length (390-542 amino acids) derived by the alternative splicing of at least three exons (4, 5, or 6). This variation accounts for the different isoforms of CD45 (180-220 kDa). The remainder of the molecule includes a short transmembrane region followed by a large highly conserved cytoplasmic domain of 702 residues. The CD45 cytoplasmic domain possesses an intrinsic protein tyrosine phosphatase (PTPase) activity. This region contains two PTPase domains (domains I and II) which share 40% homology. Both domains are required for optimal PTPase activity and show significant homology with other receptor-like and cytoplasmic PTPases. CD45 plays a critical role in antigen receptor-induced responses of T and B cells. In B cells, CD45 can exist as part of a larger multisubunit complex composed of several tyrosine phosphorylated proteins, including the Src-family PTK, Lyn, or it can exist as the membrane immunoglobulin-associated MB-1/B29 heterodimer. In T cells, CD45 associates with and dephosphorylates both lck and fyn. In addition, CD45 can associate with membrane proteins involved in T cell activation, such as CD2, Thy-1, TCR, and CD26. Synonyms: Leukocyte Common Antigen, GP180, T200
Molecular Weight:	180-220 kDa
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

Comment:	Related Products: ABIN968537, ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % 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.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20° C.

Publications

Product cited in:

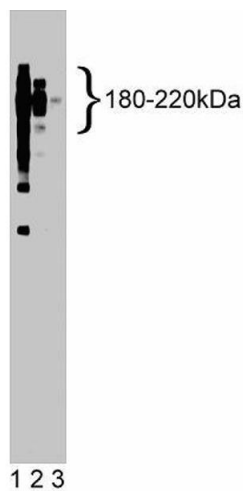
Wu, Fu, Shen: "SKAP55 coupled with CD45 positively regulates T-cell receptor-mediated gene transcription." in: **Molecular and cellular biology**, Vol. 22, Issue 8, pp. 2673-86, (2002) ([PubMed](#)).

Wang, Liang, Esselman: "Regulation of the calcium/NF-AT T cell activation pathway by the D2 domain of CD45." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 164, Issue 5, pp. 2557-64, (2000) ([PubMed](#)).

Phipps, Yousefi, Branch: "Increased enzymatic activity of the T-cell antigen receptor-associated fyn protein tyrosine kinase in asymptomatic patients infected with the human immunodeficiency virus." in: **Blood**, Vol. 90, Issue 9, pp. 3603-12, (1997) ([PubMed](#)).

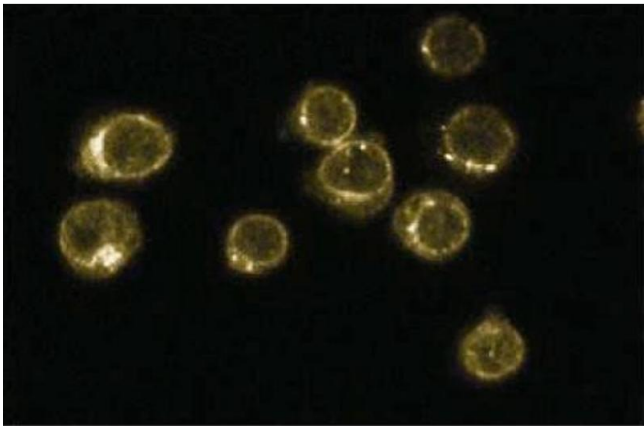
Biffen, McMichael-Phillips, Larson, Venkitaraman, Alexander: "The CD45 tyrosine phosphatase regulates specific pools of antigen receptor-associated p59fyn and CD4-associated p56lck tyrosine in human T-cells." in: **The EMBO journal**, Vol. 13, Issue 8, pp. 1920-9, (1994) ([PubMed](#)).

Sieh, Bolen, Weiss: "CD45 specifically modulates binding of Lck to a phosphopeptide encompassing the negative regulatory tyrosine of Lck." in: **The EMBO journal**, Vol. 12, Issue 1, pp. 315-21, (1993) ([PubMed](#)).



Western Blotting

Image 1. Western blot analysis of CD45 on a Jurkat cell lysate (Human T-cell leukemia, ATCC TIB-152). Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the mouse anti-CD45 antibody.



Immunofluorescence

Image 2. Immunofluorescence staining of Jurkat cells (Human T-cell leukemia, ATCC TIB-152).