

CD45 Antibody (aa1029-1249, clone 3G4)

Mouse Monoclonal Antibody Catalog # ALS12557

Specification

CD45 Antibody (aa1029-1249, clone 3G4) - Product Information

Application WB, IHC-P, E
Primary Accession P08575
Reactivity Human
Host Mouse
Clonality Monoclonal
Calculated MW 147kDa KDa
Dilution WB~~1:1000
IHC-P~~N/A

E~~N/A

CD45 Antibody (aa1029-1249, clone 3G4) - Additional Information

Gene ID 5788

Other Names

Receptor-type tyrosine-protein phosphatase C, 3.1.3.48, Leukocyte common antigen, L-CA, T200, CD45, PTPRC, CD45

Reconstitution & Storage

Long term: -20°C; Short term: +4°C; Avoid freeze-thaw cycles.

Precautions

CD45 Antibody (aa1029-1249, clone 3G4) is for research use only and not for use in diagnostic or therapeutic procedures.

CD45 Antibody (aa1029-1249, clone 3G4) - Protein Information

Name PTPRC (HGNC:9666)

Synonyms CD45

Function

Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor (PubMed:35767951). 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). Interacts with CLEC10A at antigen presenting cell-T cell contact; CLEC10A on immature dendritic cells recognizes Tn antigen- carrying PTPRC/CD45 receptor on effector T cells and modulates T cell activation threshold to limit autoreactivity.





Cellular Location

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

Tissue Location

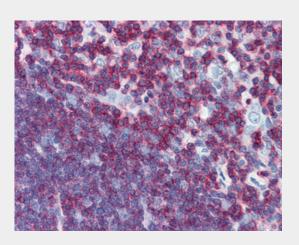
Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes Isoform 8: Not detected in thymocytes.

CD45 Antibody (aa1029-1249, clone 3G4) - Protocols

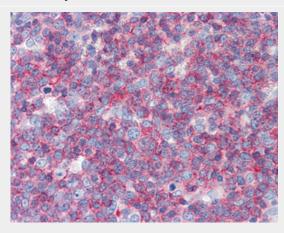
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD45 Antibody (aa1029-1249, clone 3G4) - Images



Anti-CD45 antibody IHC of human thymus.





Anti-CD45 antibody IHC of human tonsil.

CD45 Antibody (aa1029-1249, clone 3G4) - Background

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).

CD45 Antibody (aa1029-1249, clone 3G4) - References

Streuli M., et al.J. Exp. Med. 166:1548-1566(1987). Ralph S.J., et al.EMBO J. 6:1251-1257(1987). Ota T., et al.Nat. Genet. 36:40-45(2004). Tsai A.Y.M., et al.Mol. Cell. Biol. 9:4550-4555(1989). Hall L.R., et al.J. Immunol. 141:2781-2787(1988).