10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CD4 Antibody (clone 5D9)

Mouse Monoclonal Antibody
Catalog # ALS16661

Specification

CD4 Antibody (clone 5D9) - Product Information

Application	**IHC, WB**
Primary Accession	P01730
Other Accession	920
Reactivity	**Human, Monkey**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG2a**
Calculated MW	**51111**

CD4 Antibody (clone 5D9) - Additional Information

Gene ID 920

Other Names
CD4, CD4 antigen, CD4 receptor, CD4mut, CD4 antigen (p55), CD4 molecule

Target/Specificity
Human CD4

Reconstitution & Storage
PBS, pH 7.3, 1% BSA, 50% glycerol, 0.02% sodium azide. Store at -20°C. Minimize freezing and thawing.

Precautions
CD4 Antibody (clone 5D9) is for research use only and not for use in diagnostic or therapeutic procedures.

CD4 Antibody (clone 5D9) - Protein Information

Name CD4

Function
Integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. In T-cells, functions primarily as a coreceptor for MHC class II molecule:peptide complex. The antigens presented by class II peptides are derived from extracellular proteins while class I peptides are derived from cytosolic proteins. Interacts simultaneously with the T-cell receptor (TCR) and the MHC class II presented by antigen presenting cells (APCs). In turn, recruits the Src kinase LCK to the vicinity of the TCR-CD3 complex. LCK then initiates different intracellular signaling pathways by phosphorylating various substrates ultimately leading to lymphokine production, motility, adhesion and activation of T-helper cells. In other cells such as macrophages or NK cells, plays a role in differentiation/activation, cytokine expression and cell migration in a TCR/LCK-independent

pathway. Participates in the development of T- helper cells in the thymus and triggers the differentiation of monocytes into functional mature macrophages.

Cellular Location
Cell membrane; Single-pass type I membrane protein. Note=Localizes to lipid rafts (PubMed:12517957, PubMed:9168119). Removed from plasma membrane by HIV- 1 Nef protein that increases clathrin-dependent endocytosis of this antigen to target it to lysosomal degradation. Cell surface expression is also down-modulated by HIV-1 Envelope polyprotein gp160 that interacts with, and sequesters CD4 in the endoplasmic reticulum

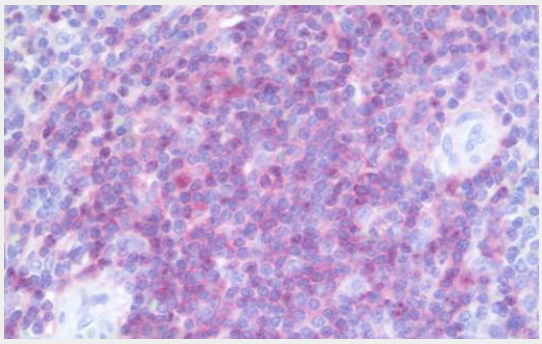
Tissue Location
Highly expressed in T-helper cells. The presence of CD4 is a hallmark of T-helper cells which are specialized in the activation and growth of cytotoxic T-cells, regulation of B cells, or activation of phagocytes. CD4 is also present in other immune cells such as macrophages, dendritic cells or NK cells

CD4 Antibody (clone 5D9) - Protocols

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

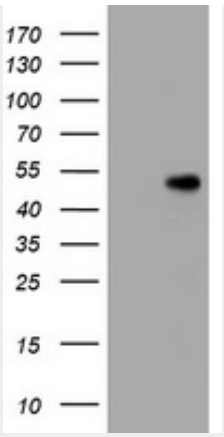
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD4 Antibody (clone 5D9) - Images

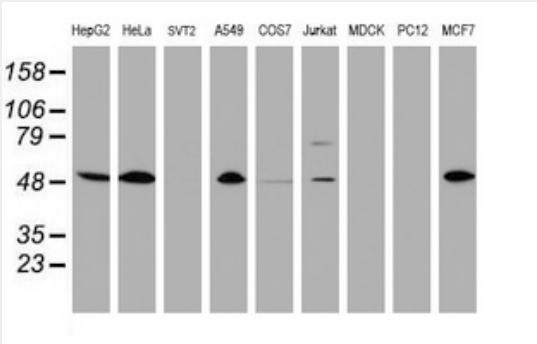


Anti-CD4 antibody IHC staining of human spleen.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY CD4...



Western blot of extracts (35 ug) from 9 different cell lines by using anti-CD4 monoclonal...

CD4 Antibody (clone 5D9) - Background

Accessory protein for MHC class-II antigen/T-cell receptor interaction. May regulate T-cell activation. Induces the aggregation of lipid rafts.

CD4 Antibody (clone 5D9) - References

Maddon P.J.,et al.Cell 42:93-104(1985).
Littman D.R.,et al.Cell 55:541-541(1988).
Ansari-Lari M.A.,et al.Genome Res. 6:314-326(1996).
Ansari-Lari M.A.,et al.Genome Res. 7:268-280(1997).
Hodge T.W.,et al.Hum. Immunol. 30:99-104(1991).