

**CD4 Antibody (clone 5D9)**  
**Mouse Monoclonal Antibody**  
**Catalog # ALS16661**

**Specification**

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**CD4 Antibody (clone 5D9) - Product Information**

Application	<b>IHC, WB</b>
Primary Accession	<a href="#">P01730</a>
Other Accession	<a href="#">920</a>
Reactivity	<b>Human, Monkey</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG2a</b>
Calculated MW	<b>51111</b>

**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**

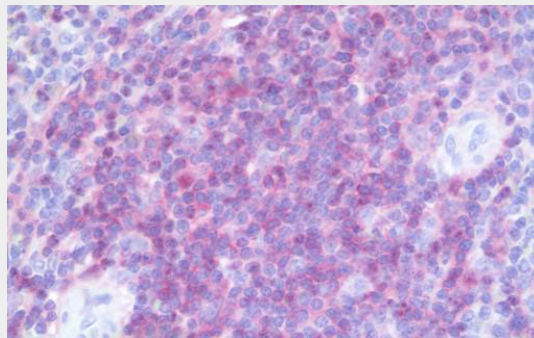
Highly expressed in T-helper cells. The presence of CD4 is a hallmark of T-helper cells which are specialized in the activation and growth of cytotoxic T-cells, regulation of B cells, or activation of phagocytes. CD4 is also present in other immune cells such as macrophages, dendritic cells or NK cells

#### **CD4 Antibody (clone 5D9) - Protocols**

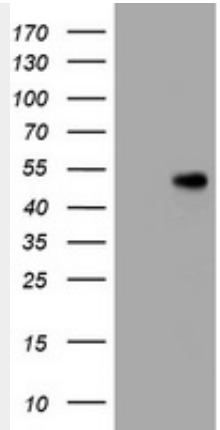
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

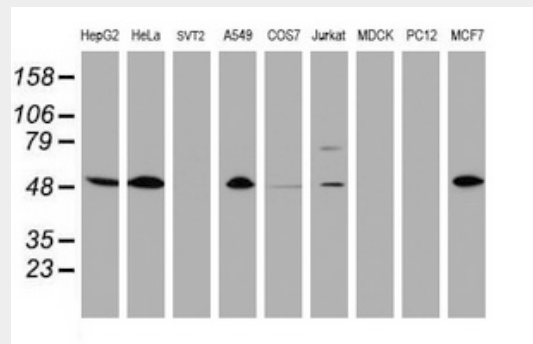
#### **CD4 Antibody (clone 5D9) - Images**



Anti-CD4 antibody IHC staining of human spleen.



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).