

CD4 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11448**Specification**

CD4 Antibody - Product Information

| | |
|-------------------|--------------------------------|
| Application | WB |
| Primary Accession | P01730 |
| Reactivity | Human, Mouse, Rat, Monkey, Dog |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | Rabbit IgG |
| Calculated MW | 51111 |

CD4 Antibody - Additional Information**Gene ID 920**

| | |
|---|--|
| Positive Control | WB: SP20, PC12, H9C2 whole cell lysate |
| Application & Usage | WB: 1:500 - 1:1000 |
| Other Names | |
| T-cell surface glycoprotein CD4; T-cell surface antigen T4/Leu-3; CD4 | |

Target/Specificity
CD4**Antibody Form**
Liquid**Appearance**
Colorless liquid**Formulation**
1 mg/ml in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.**Handling**
The antibody solution should be gently mixed before use.**Reconstitution & Storage**
-20 °C**Background Descriptions****Precautions**
CD4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.**CD4 Antibody - 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

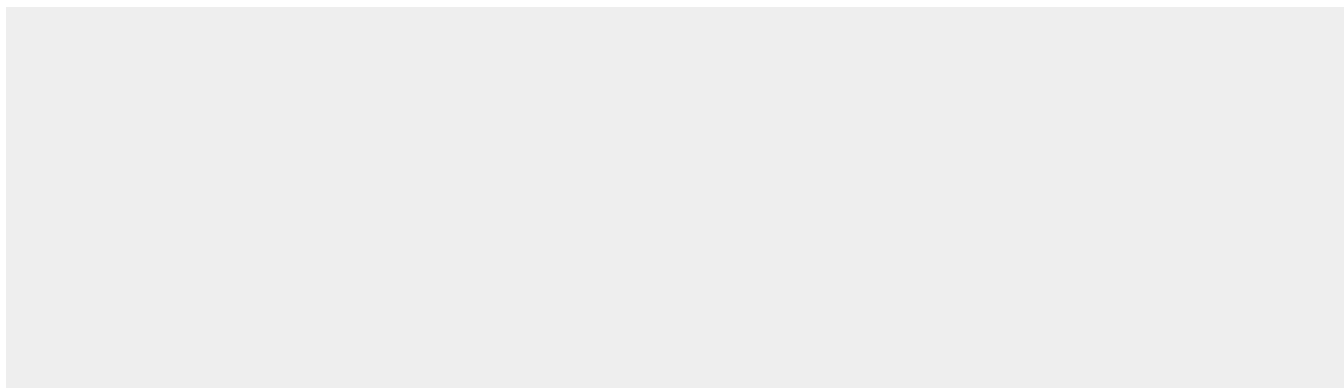
Tissue Location

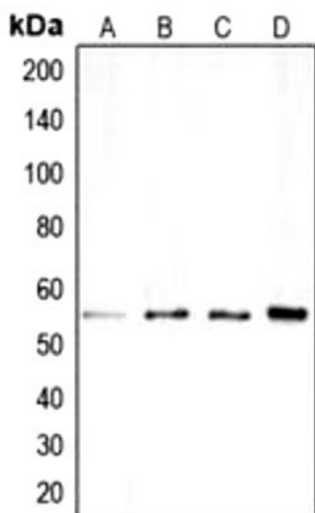
Highly expressed in T-helper cells. The presence of CD4 is a hallmark of T-helper cells which are specialized in the activation and growth of cytotoxic T-cells, regulation of B cells, or activation of phagocytes. CD4 is also present in other immune cells such as macrophages, dendritic cells or NK cells

CD4 Antibody - 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 - Images



Western blot analysis of CD4 expression in (A), SP20 (B), PC12 (C), H9C2 (D) whole cell lysates.

CD4 Antibody - Background

CD4 is a cell-surface glycoprotein found on the mature helper T cells and immature thymocytes, as well as on monocytes and macrophages. (Some cytotoxic T cells have CD4 protein as well.) Normally, about 65% of T cells in the blood are CD4+ (have CD4 protein protruding from their membrane). A mature T cell will have either CD4 or CD8, but not both. During one stage of development T cells develop CD4 and CD8 receptors, but they eventually are differentiated in the thymus and become more specialized. CD4 is also expressed on cortical cells, mature medullary thymocytes, microglial cells and dendritic cells.