

CD4 Antibody
Rabbit mAb
Catalog # AP90427

Specification

CD4 Antibody - Product Information

Application	WB, IHC, FC, ICC
Primary Accession	P01730
Clonality	Monoclonal
Other Names	
CD4; Leu3; L3T4; Ly4; p55; W3/25;	

Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	51111 Da

CD4 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human CD4
Description	Cluster of Differentiation 4 (CD4) is a glycoprotein composed of an amino-terminal extracellular domain (four domains: D1-D4 with Ig-like structures), a transmembrane part and a short cytoplasmic tail. CD4 is expressed on the surface of T helper cells, regulatory T cells, monocytes, macrophages and dendritic cells, and plays an important role in the development and activation of T cells. On T cells, CD4 is the co-receptor for the T cell receptor (TCR), and these two distinct structures recognize the Antigen-Major Histocompatibility Complex (MHC).
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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

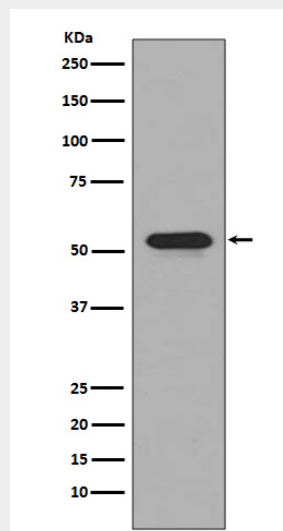
Highly expressed in T-helper cells. The presence of CD4 is a hallmark of T-helper cells which are specialized in the activation and growth of cytotoxic T-cells, regulation of B cells, or activation of phagocytes. CD4 is also present in other immune cells such as macrophages, dendritic cells or NK cells

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 THP-1 cell lysate.