

# CD4 Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51056

## Product Information

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<b>Application</b>	WB
<b>Primary Accession</b>	<a href="#">P01730</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	51111

## Additional Information

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<b>Gene ID</b>	920
<b>Other Names</b>	T-cell surface glycoprotein CD4, T-cell surface antigen T4/Leu-3, CD4, CD4
<b>Dilution</b>	WB~~1:1000
<b>Format</b>	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
<b>Storage</b>	Store at -20 °C.Stable for 12 months from date of receipt

## Protein Information

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<b>Name</b>	CD4
<b>Function</b>	<p>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.</p>
<b>Cellular Location</b>	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

## **Background**

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

## **References**

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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).  
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Hodge T.W.,et al.Hum. Immunol. 30:99-104(1991).

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