

## CD4 Monoclonal Antibody

<b>Catalog No :</b>	YM0124
<b>Reactivity :</b>	Human
<b>Applications :</b>	FCM;ELISA
<b>Target :</b>	CD4
<b>Fields :</b>	>>Viral life cycle - HIV-1;>>Cytokine-cytokine receptor interaction;>>Cell adhesion molecules;>>Antigen processing and presentation;>>Hematopoietic cell lineage;>>Th1 and Th2 cell differentiation;>>Th17 cell differentiation;>>T cell receptor signaling pathway;>>Yersinia infection;>>Human T-cell leukemia virus 1 infection;>>Human immunodeficiency virus 1 infection;>>PD-L1 expression and PD-1 checkpoint pathway in cancer;>>Primary immunodeficiency
<b>Gene Name :</b>	CD4
<b>Protein Name :</b>	T-cell surface glycoprotein CD4
<b>Human Gene Id :</b>	920
<b>Human Swiss Prot No :</b>	P01730
<b>Mouse Swiss Prot No :</b>	P06332
<b>Immunogen :</b>	Purified recombinant fragment of human CD4 expressed in E. Coli.
<b>Specificity :</b>	CD4 Monoclonal Antibody detects endogenous levels of CD4 protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Monoclonal, Mouse
<b>Dilution :</b>	Flow cytometry: 1:200 - 1:400. ELISA: 1:10000. Not yet tested in other applications.
<b>Purification :</b>	Affinity purification

**Concentration :** 0.5 mg/ml

---

**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)

---

**Cell Pathway :** Cell adhesion molecules (CAMs);Antigen processing and presentation;Hematopoietic cell lineage;T\_Cell\_Receptor;Primary immunodeficiency;

---

**P References :** 1. M Benkirane J Virol. 1995 November; 69(11): 6898–6903.

---

**Background :** This gene encodes a membrane glycoprotein of T lymphocytes that interacts with major histocompatibility complex class II antigens and is also a receptor for the human immunodeficiency virus. This gene is expressed not only in T lymphocytes, but also in B cells, macrophages, and granulocytes. It is also expressed in specific regions of the brain. The protein functions to initiate or augment the early phase of T-cell activation, and may function as an important mediator of indirect neuronal damage in infectious and immune-mediated diseases of the central nervous system. Multiple alternatively spliced transcript variants encoding different isoforms have been identified in this gene. [provided by RefSeq, Aug 2010],

---

**Function :** function:Accessory protein for MHC class-II antigen/T-cell receptor interaction. May regulate T-cell activation. Induces the aggregation of lipid rafts.,miscellaneous:Primary receptor for HIV-1.,online information:CD4 entry,PTM:Palmitoylation and association with LCK contribute to the enrichment of CD4 in lipid rafts.,similarity:Contains 1 Ig-like V-type (immunoglobulin-like) domain.,similarity:Contains 3 Ig-like C2-type (immunoglobulin-like) domains.,subcellular location:Localizes to lipid rafts. 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.,subunit:Associates with LCK. Binds to HIV-1 gp120 and to P4HB/PDI and upon HIV-1 binding to t

---

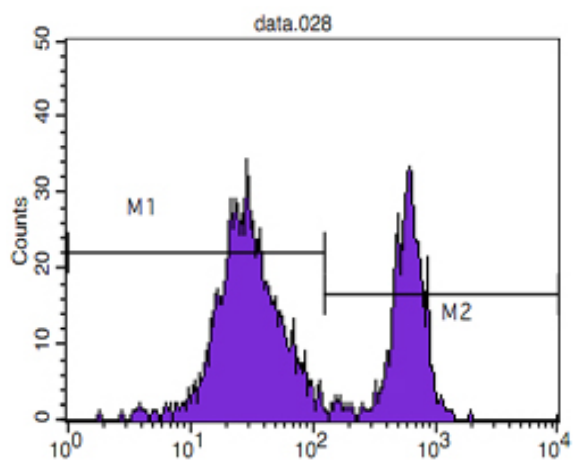
**Subcellular Location :** Cell membrane ; Single-pass type I membrane protein . Localizes to lipid rafts (PubMed:12517957, PubMed:9168119). Removed from plasma membrane by HIV-1 Nef protein that increases clathrin-dependent endocytosis of this antigen to target it to lysosomal degradation. Cell surface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

---

**Expression :** 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.

---

## Products Images



Flow cytometric analysis of blood T cells using CD4 Monoclonal Antibody (M2) and negative control (M1).