

human CD4 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8658b

Specification

human CD4 Antibody - Product Information

Application	FC,E
Primary Accession	P01730
Reactivity	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG2b
Clone Names	OKT4 Equivalent
Calculated MW	51111

human CD4 Antibody - Additional Information

Gene ID 920

Other Names

T-cell surface glycoprotein CD4, T-cell surface antigen T4/Leu-3, CD4, CD4

Dilution

FC~~1:50

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

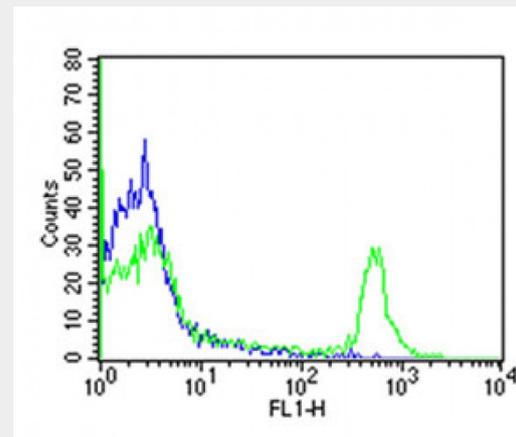
human CD4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

human 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



Overlay histogram showing human peripheral blood lymphocytes stained with CD4 antibody (green line). The cells were incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (1:50 dilution) for 60min at 37°C. The secondary antibody used was Goat Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OJ192088) at 1/200 dilution for 40min at 37°C. Isotype control antibody (blue line) was mouse IgG2b (1µg/1x10⁶ cells) used under the same conditions. Acquisition of >10,000 events was performed.

human CD4 Antibody - Background

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

human CD4 Antibody - 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).

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.

human 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](#)