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CD4 Antibody [9H5A8]

Catalog # ASC12005

Specification

CD4 Antibody [9H5A8] - Product Information

Application	**IF**
Primary Accession	P01730
Other Accession	NP_000607, 920
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Application Notes	**CD4 antibody can be used for detection of CD4 by Western blot at 0.5 - 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL**

CD4 Antibody [9H5A8] - Additional Information

Gene ID **920**

Target/Specificity
Mouse monoclonal CD4 antibody was raised against a 193 amino acid recombinant protein from near the amino terminus of human CD4.

Reconstitution & Storage
CD4 monoclonal antibody can be stored at -20℃, stable for one year.

Precautions
CD4 Antibody [9H5A8] is for research use only and not for use in diagnostic or therapeutic procedures.

CD4 Antibody [9H5A8] - 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

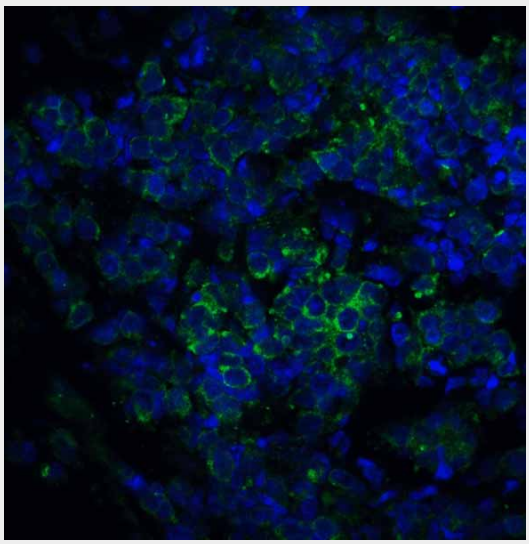
Tissue Location
Highly expressed in T-helper cells. The presence of CD4 is a hallmark of T-helper cells which are specialized in the activation and growth of cytotoxic T-cells, regulation of B cells, or activation of phagocytes. CD4 is also present in other immune cells such as macrophages, dendritic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

CD4 Antibody [9H5A8] - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD4 Antibody [9H5A8] - Images



Immunofluorescence of ST2 in human lung cancer tissue with ST2 antibody at 5 µg/ml.

CD4 Antibody [9H5A8] - Background

CD4 Monoclonal Antibody: CD4 is a member of the immunoglobulin superfamily and is implicated as associative recognition element in MHC (Major Histocompatibility Complex) class II-restricted immune response. On T-lymphocytes, it defines the helper/inducer subset. The mature 55 kd CD4 protein consists of a 372 amino acid extracellular segment composed of four tandem immunoglobulin-like VJ regions. The CD4 molecule is a major receptor for human immunodeficiency

virus (HIV), binding directly to the envelope glycoprotein gp120 on HIV, with the co-receptors being CCR5 or CXCR4. It has been shown that the V-like domains are critical for binding with HIV envelope gp120.

CD4 Antibody [9H5A8] - References

Bowers K, Pitcher C, and Marsh M. CD4 : a co-receptor in the immune response and HIV infection. Int. J. Biochem. Cell Biol. 1997; 29 :871-5.
Arthos J, Deen KC, Chaikin MA, et al. Identification of the residues in human CD4 critical for the binding of HIV. Cell 1989; 57:469-81.