

CD4/LEU3

Catalog # PVGS1872

Specification

CD4/LEU3 - Product Information

Primary Accession Species Human <u>P01730</u>

Sequence Lys26-Trp390

Purity

> 95% as determined by Bis-Tris PAGE
> 95% as determined by HPLC

Endotoxin Level Less than 1EU per μ g by the LAL method.

Biological Activity

Measured by its binding ability in a functional ELISA. Immobilized Anti-CD4 Antibody, hFc Tag at 2 μ g/ml (100 μ l/well) on the plate can bind CD4/LEU3 [Biotin], His & Avi, Human. Test result was comparable to standard batch.

Expression System HEK293

Theoretical Molecular Weight 43.6 kDa

Formulation

Lyophilized from a 0.22 μ m filtered solution in PBS[(pH 7.4).

Reconstitution

Centrifuge the tube before opening. Reconstituting to a concentration more than 100 μ g/ml is recommended. Dissolve the lyophilized protein in distilled water.

Storage & Stability Upon receiving, the product remains stable up to 6 months at -20 °C or below. Upon reconstitution, the product should be stable for 3 months at -80 °C. Avoid repeated freeze-thaw cycles.

CD4/LEU3 - Additional Information

Gene ID 920

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

Target Background

CD4, also known as L3T4, T4, and W3/25, is an approximately 55 kDa type I transmembrane



glycoprotein that is expressed predominantly on thymocytes and a subset of mature T lymphocytes. It is a standard phenotype marker for the identification of T cell populations.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.

CD4/LEU3 - 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/LEU3 - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

CD4/LEU3 - Images