

**CD4/LEU3**  
**Catalog # PVGS1858****Specification**

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**CD4/LEU3 - Product Information**

Primary Accession [P01730](#)  
**Species**  
Human

**Sequence**  
Lys26-Trp390

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

**Endotoxin Level**  
Less than 1EU per µg by the LAL method.

**Biological Activity**  
Measured by its binding ability in a functional ELISA. Immobilized CD4/LEU3 hFc Chimera, Human at 0.5 µg/ml (100 µl/well) on the plate can bind Biotinylated Anti-CD4 Antibody, hFc Tag. Test result was comparable to standard batch.

**Expression System**  
HEK293

**Theoretical Molecular Weight**  
67.5 kDa

Formulation **Lyophilized from a 0.22 µm filtered solution in PBS, 100mM L-arginine(pH 7.4).**

**Reconstitution**  
Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/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.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **CD4/LEU3 - Images**