

# CD4/LEU3

Catalog # PVGS1872

## Product Information

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<b>Primary Accession Species</b>	<a href="#">P01730</a> Human
<b>Sequence</b>	Lys26-Trp390
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC
<b>Endotoxin Level</b>	Less than 1EU per $\mu$ g by the LAL method.
<b>Biological Activity</b>	Measured by its binding ability in a functional ELISA. Immobilized Anti-CD4 Antibody, hFc Tag at 2 $\mu$ g/ml (100 $\mu$ l/well) on the plate can bind CD4/LEU3 [Biotin], His & Avi, Human. Test result was comparable to standard batch.
<b>Expression System</b>	HEK293
<b>Theoretical Molecular Weight</b>	43.6 kDa
<b>Formulation Reconstitution</b>	Lyophilized from a 0.22 $\mu$ m filtered solution in PBS , (pH 7.4). Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu$ g/ml is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage &amp; Stability</b>	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.

## Additional Information

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<b>Gene ID</b>	920
<b>Other Names</b>	T-cell surface glycoprotein CD4, T-cell surface antigen T4/Leu-3, CD4, CD4
<b>Target Background</b>	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.

## Protein Information

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<b>Name</b>	CD4
<b>Function</b>	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.
<b>Cellular Location</b>	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
<b>Tissue Location</b>	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

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