

## Biotin Human CD4 (C-Fc-Avi)

<b>Catalog Number:</b>	811003, 811004
<b>Size:</b>	25 ug, 100 ug
<b>Target Name:</b>	CD4, CD4mut, LEU3
<b>Regulatory Status:</b>	RUO

### PRODUCT DETAILS

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<b>Application:</b>	ELISA, BLI
<b>Format:</b>	Liquid, Biotinylated
<b>Expression Host:</b>	CHO
<b>Species:</b>	Human
<b>Sources:</b>	Recombinant Human CD4 Protein ( Lys26-Trp390) with C-terminus Fc-Avi-tag is expressed in CHO cell. This protein was site-specifically labeled with Biotin by BirA ligase.
<b>Accession Number:</b>	P01730
<b>Molecular Weight:</b>	The protein has a predicted molecular weight of 69 kDa. Under DTT-reducing conditions, it migrates at approximately 80 kDa on SDS-PAGE.
<b>Affinity Tag:</b>	C-Fc-Avi
<b>Purity:</b>	>90% based on SDS-PAGE under reducing condition
<b>Formulation:</b>	1xPBS buffer, pH7.4, 0.22 µm filtered
<b>Endotoxin level:</b>	Not tested
<b>Protein Concentration:</b>	25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.
<b>Storage and Handling:</b>	Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

### BACKGROUND INFORMATION

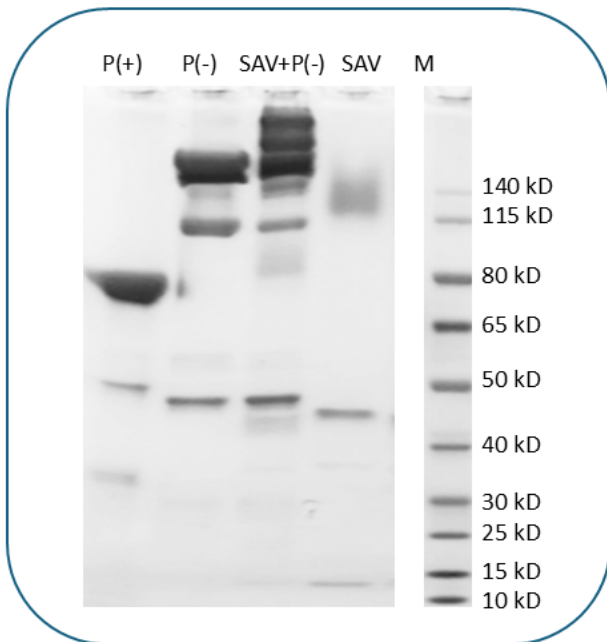
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CD4 is a single-pass type I transmembrane glycoprotein belonging to the immunoglobulin superfamily, composed of one Ig-like V-type and three Ig-like C2-type domains. It is expressed on helper T cells, regulatory T cells, monocytes, macrophages, and dendritic cells, functioning as a co-receptor for the T-cell receptor (TCR) by binding MHC class II molecules on antigen-presenting cells to enhance TCR signaling. CD4 also serves as the primary receptor for HIV-1, binding to viral gp120 to mediate viral entry. HIV-1 viral protein U (VpU) binds to the membrane-proximal region of CD4's cytoplasmic domain, promoting its degradation in the endoplasmic reticulum and preventing surface expression, aiding viral immune evasion. CD4 plays a central role in T-cell activation

and HIV infection and is a key focus in immunological and virological research.

## PRODUCT DATA

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Human CD4 (C-Fc-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under reducing (P+) and non-reducing (P-) conditions shows the protein has a purity greater than 90%. A gel shift assay using co-incubation with streptavidin indicates that the biotinylation efficiency of the CD4 protein exceeds 80%.

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