

Technical Data Sheet

Biotinylated Human CD4 (C-Fc-Avi)

Catalog Number: 811003, 811004

Size: 25 ug, 100 ug

Target Name: CD4, CD4mut, LEU3

Regulatory Status: RUO

Product Details

Application: ELISA, BLI

Format: Liquid, Biotinylated

Expression Host: CHO

Species: Human

Sources: 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.

Accession Number: P01730

Molecular Weight: The protein has a predicted molecular weight of 69 kDa. Under DTT-reducing conditions, it migrates at approximately 80 kDa on SDS-PAGE.

Affinity Tag: C-Fc-Avi

Purity: >90% based on SDS-PAGE under reducing condition

Formulation: 1xPBS buffer, pH7.4, 0.22 µm filtered

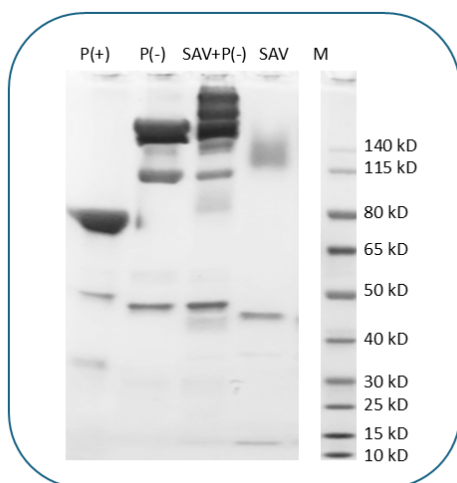
Endotoxin level: Not tested

Protein Concentration: 25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.

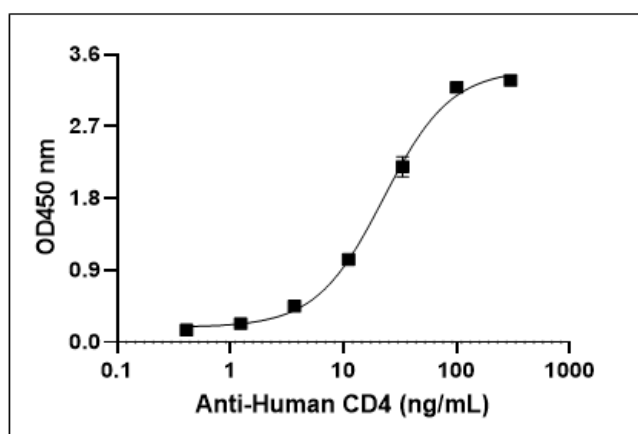
Storage and Handling: Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution 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

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


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%.



Biotinylated Human CD4 Protein (C-Fc-Avi) is coated at 1 ug/mL (100ng/well). Anti-human CD4 antibody (Clone OKT4) can bind human CD4 protein in dose-dependent manner with the ED50 of 10-40 ng/mL