InnoCyto Inc.
15375 Barranca Pkwy, Suite I-103
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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.

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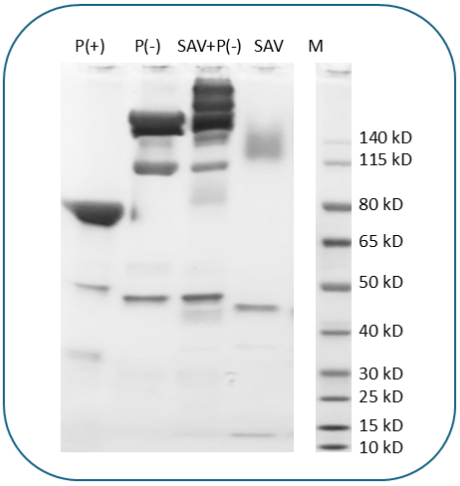
Product Data



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%.