InnoCyto Inc.
15375 Barranca Pkwy, Suite I-103
Irvine, CA 92618

Technical Data Sheet

Biotinylated Human CTLA4 Protein (C-Fc-Avi)

Catalog Number: 808103, 808104
Size: 25 ug, 100 ug
Target Name: CTLA4, CD152
Regulatory Status: RUO

Product Details

Application: ELISA, BLI
Format: Liquid, Biotinylated
Expression Host: CHO
Species: Human
Sources: Recombinant Human CTLA4 Protein (Ala37-Phe162) with C-terminus Fc-Avi-tag is expressed in CHO cell. This protein was site-specifically labeled with Biotin by BirA ligase.
Accession Number: P16410
Molecular Weight: The protein has a predicted molecular weight of 41.9 kDa. Under DTT-reducing conditions, it migrates at approximately 50 kDa on SDS-PAGE.
Affinity Tag: C-Fc-Avi
Purity: >95% 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

Cytotoxic T-lymphocyte-associated protein 4 (CTLA-4), also known as CD152, is an immune checkpoint receptor found on T cells. It shares 30% homology with CD28 and binds to the same ligands, B7.1/CD80 and B7.2/CD86, but with higher affinity. After T-cell activation, increased CTLA-4 expression leads to immune suppression by binding to CD80/CD86, inhibiting further T-cell activation through a process called trans-endocytosis.CTLA-4 is crucial for immune regulation and tolerance, especially on regulatory T cells (Tregs). Soluble CTLA-4 (sCTLA-4) further enhances Treg function and is linked to autoimmune diseases like type 1 diabetes. Additionally, CTLA-4 plays a role in chronic lymphocytic leukemia (CLL) progression.Due to its immune-modulatory role, CTLA-4 is targeted in cancer therapy. Ipilimumab, a monoclonal antibody that blocks CTLA-4, is approved for melanoma and is being explored for other cancers.

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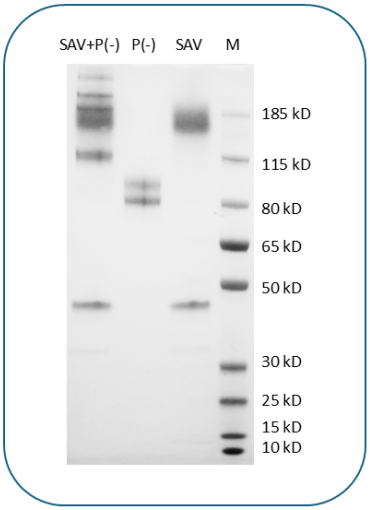
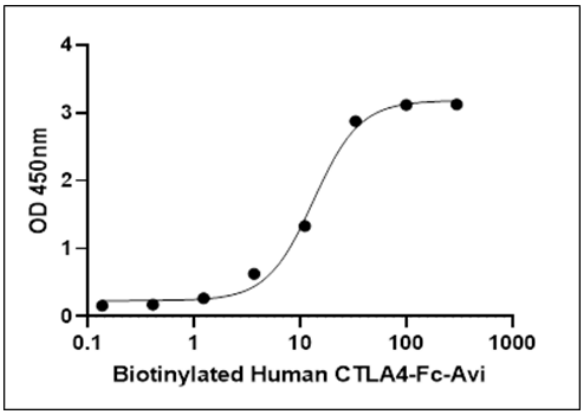
Product Data



Human CTLA4 Protein (C-Fc-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under non-reducing (P–) conditions shows the protein has a purity greater than 95%. A gel shift assay using co-incubation with streptavidin indicates that the biotinylation efficiency of the CTLA4 protein exceeds 90%.



Human B7-1 with Fc tag is coated at 2ug/mL (200ng/well). Biotinylated human CTLA4 (C-His-Avi) can bind B7-1 in dose-dependent manner with the ED50 of 10-30 ng/mL