

Technical Data Sheet

Biotinylated Human CD64 Protein (C-His-Avi)

Catalog Number: 800403, 800404
Size: 25 ug, 100 ug
Target Name: CD64, FCGR1A, FCG1, FCGR1, IGFR1
Regulatory Status: RUO

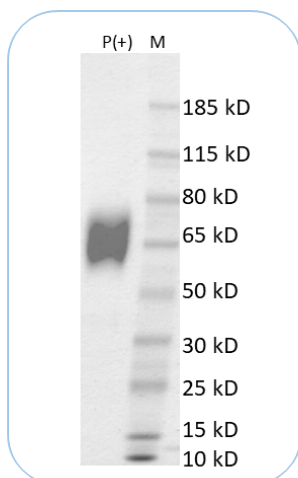
Product Details

Application: ELISA, BLI
Format: Liquid, Biotinylated
Expression Host: CHO
Species: Human
Sources: Human CD64 protein (Accession Number P12314) (Gln16-Thr287) with C-terminus His tag and Avi tag is expressed in CHO cells. This protein was site-specifically labeled with Biotin by BirA ligase.
Accession Number: P12314
Molecular Weight: The 307 amino acid protein has a predicted molecular weight of 34.2kDa. The protein migrates at approximately 50-60 kDa on SDS-PAGE with DTT-reduced conditions.
Affinity Tag: C-His-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.

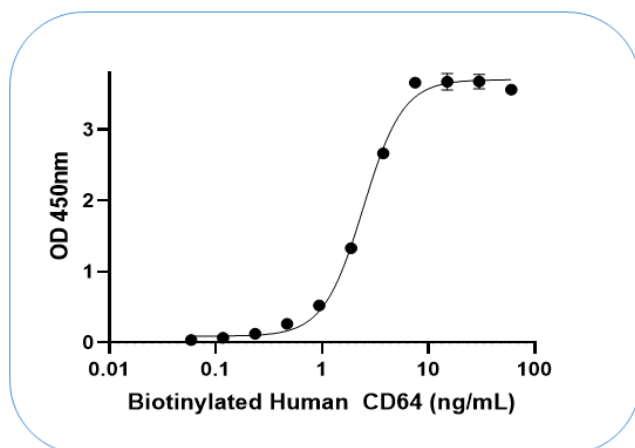
Background Information

CD64, also known as FcγRI or FcR I, is a 72 kDa type I glycoprotein and a member of the immunoglobulin superfamily. This high-affinity IgG Fc receptor is predominantly expressed on monocytes, macrophages, dendritic cells, and activated granulocytes. Its expression can be upregulated by IFN-γ stimulation, enhancing its role in immune responses. CD64 binds IgG immune complexes and is involved in several crucial immune functions, including antigen capture, phagocytosis of IgG/antigen complexes, and antibody-dependent cellular cytotoxicity (ADCC). By mediating these processes, CD64 contributes to the activation of innate immune responses and the clearance of immune complexes.

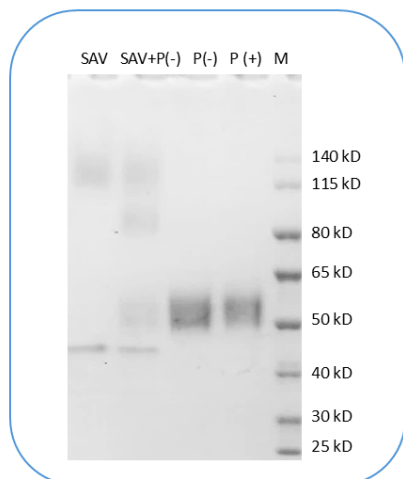
Product Data



Biotinylated human CD64 (C-His-Avi) protein on SDS-PAGE under reducing condition. The gel was stained for 1 hour with BlinkBlue (catalog 700102). The purity of this protein appears to be greater than 95%.



Human IgG1 isotype is coated at 1 ug_{mL} (100ng_{well}). Biotinylated Human CD64 can bind human IgG1 in the dose dependent manner. The ED50 is about 2-5 ng_{mL}. Biotinylated efficiency of this protein is >80% based Streptavidin Gel shift assay.



Human CD64 Protein (C-His-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 CD64 protein exceeds 80%.