

## Technical Data Sheet

### Human CD64 Protein (C-His-Avi)

**Catalog Number:** 800401, 800402  
**Size:** 25 ug, 100 ug  
**Target Name:** CD64, FCGR1A, FCG1, FCGR1, IGFR1  
**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI  
**Format:** Liquid, Purified  
**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.  
**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:** >85% based on SDS-PAGE under reducing condition  
**Formulation:** 1xPBS buffer, pH7.4, 0.22  $\mu$ m filtered  
**Endotoxin level:** Not tested  
**Protein Concentration:** 25 $\mu$ g size is bottled at 0.2mg/mL concentration. 100  $\mu$ g 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  $\mu$ m-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at  $\leq -70^{\circ}\text{C}$  to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

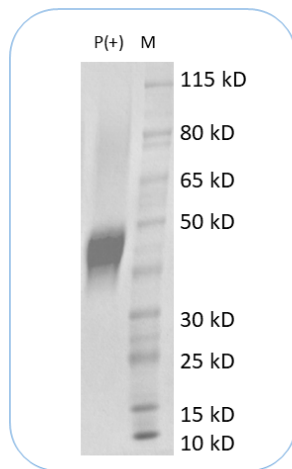
#### Background Information

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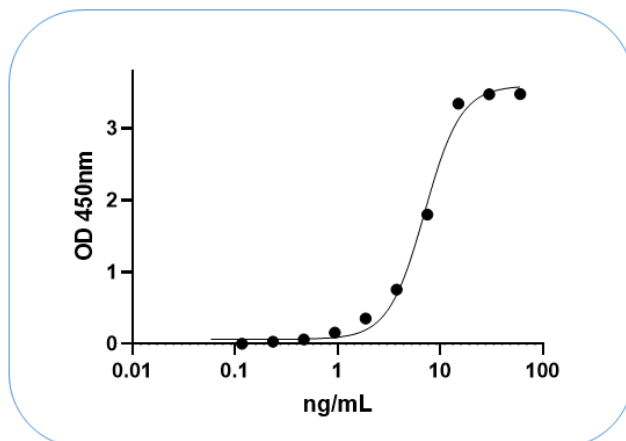
CD64, also known as Fc $\gamma$ RI or FcR I, is a 72 kDa type I glycoprotein and a member of the immunoglobulin superfamily. This high-affinity IgG Fc receptor is predominantly expressed on monocytes, macrophages, dendritic cells, and activated granulocytes. Its expression can be upregulated by IFN- $\gamma$  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**

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Recombinant 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 85%.



Human IgG1 isotype is coated at 1 ug<sub>mL</sub> (100ng<sub>well</sub>). Human CD64 can bind human IgG1 in the dose dependent manner. The ED50 is about 3-10 ng<sub>mL</sub>.