

## Technical Data Sheet

### Human CD16a Protein (C-His-Avi, 176V)

**Catalog Number:** 800201, 800202

**Size:** 25 ug, 100 ug

**Target Name:** CD16A, FCGR3A, FCG3, FCGR3, IGFR3,

**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI

**Format:** Liquid, Purified

**Expression Host:** HEK293

**Species:** Human

**Sources:** Human CD16a protein (Accession Number NP\_P08637-1, natural variant Val176) (Gly17-Gln208) with C-terminus His tag and Avi tag is expressed in HEK293 cells.

**Accession Number:** P08637

**Molecular Weight:** The 227 amino acid protein has a predicted molecular weight of 25.5 kDa. The protein migrates at approximately 40-50 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.

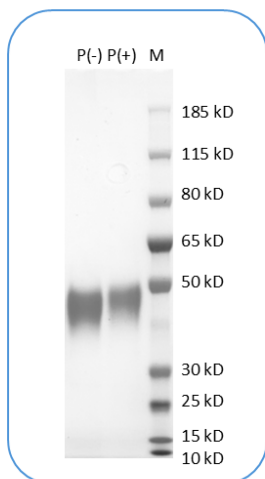
#### Background Information

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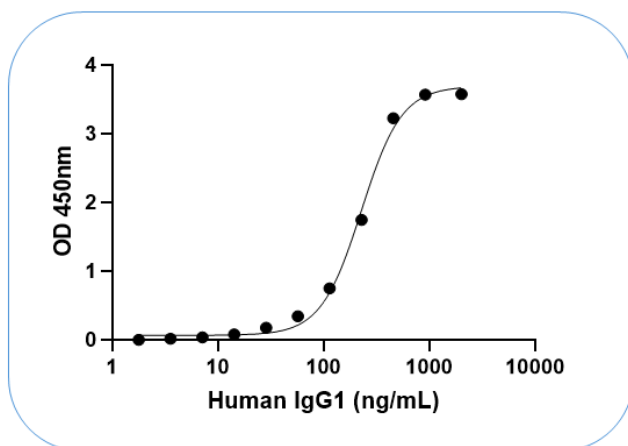
CD16 is a low-affinity Fc receptor and exists in two isoforms: FcγRIIIa (CD16a) and FcγRIIIb (CD16b). These receptors bind to the Fc region of IgG antibodies with distinct tissue-specific expression pattern. CD16a is a transmembrane glycoprotein with intermediate affinity, expressed on natural killer (NK) cells, macrophages, subsets of T cells, immature thymocytes, and placental trophoblasts. In contrast, CD16b is a low-affinity, GPI-anchored receptor expressed primarily on neutrophils and eosinophils. CD16a plays a key role in mediating phagocytosis, antibody-dependent cellular cytotoxicity (ADCC), enzyme secretion, and immune complex clearance.

#### Product Data

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Human CD16a protein (C-His-Avi, 176V) on SDS-PAGE under reducing condition (P+) and non-reducing condition (P-). The gel was stained for 1 hour with BlinkBlue (catalog 700102). The purity of this protein appears to be greater than 95%.



Human CD16a (176V) is coated at 8 ug\_mL (0.8 ug \_well). Human IgG1 can bind human CD16a (176V) in the dose dependent manner. The ED50 is about 100-400 ng\_mL.