InnoCyto Inc.
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Irvine, CA 92618

Technical Data Sheet

Biotinylated Human CD16a F176 (C-His-Avi)

Catalog Number: 819303, 819304
Size: 25 ug, 100 ug
Target Name: CD16A, FCGR3A, FCG3, FCGR3, IGFR3
Regulatory Status: RUO

Product Details

Application: ELISA, BLI
Format: Liquid, Biotinylated
Expression Host: CHO
Species: Human
Sources: Recombinant CD16a F176 (Gly17-Gln208) with C-terminus His-Avi-tag is expressed in CHO cell. This protein was site-specifically labeled with Biotin by BirA ligase.
Accession Number: P08637
Molecular Weight: The protein has a predicted molecular weight of 25.7 kDa. Under DTT-reducing conditions, it migrates at approximately 40 kDa on SDS-PAGE.
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: Less than 0.1 EU/μg protein as determined by the LAL method
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

CD16 is a low-affinity Fc receptor and exists in two isoforms: Fc?RIIIa (CD16a) and Fc?RIIIb (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.

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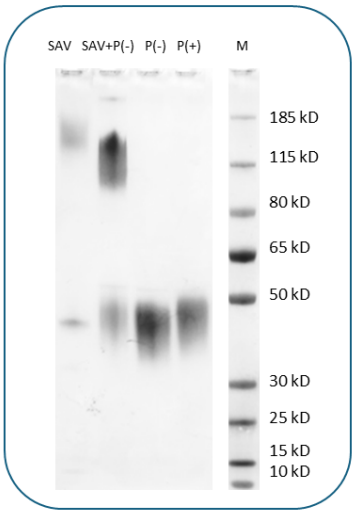

Human CD16a F176 Protein (C-His-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under reducing (P+) and non-reducing (P–) conditions shows the protein has a purity greater than 95%. A gel shift assay using co-incubation with streptavidin indicates that the biotinylation efficiency of the Human CD16a F176 protein exceeds 80%.