



Recombinant Protein Technical Manual

Recombinant Human CD16a/FCGR3A Protein (176 Val, His Tag)(Active)

RPES0212

Product Data:

Product SKU: RPES0212

Size: 50µg

Species: Human

Expression host: HEK293 Cells

Uniprot: AAH17865.1

Protein Information:

Molecular Mass: 23.3 kDa

AP Molecular Mass: 48 kDa

Tag: C-His

Bio-activity: 1. Using the Octet RED System, the affinity constant (Kd) of CD16a bound to Human IgG1 was 80nM. 2. Measured by its binding ability in a functional ELISA. Immobilized human CD16a-His(176 Val) at 10ug/ml(100ul/well) can bind human IgG1 with a linear range of 0.00128-0.8 µg/ml.

Purity: > 97 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application: Functional ELISA

Synonyms: Low Affinity Immunoglobulin Gamma Fc Region Receptor III-A; CD16a Antigen; Fc-Gamma RIII-Alpha; Fc-Gamma RIII; Fc-gamma RIIIa; FcRIII; FcRIIIa; FcR0; IgG Fc Receptor III-2; CD16a; FCGR3A; CD16A; FCG3; FCGR3; IGFR3;CD16;CD16A

Immunogen Information:

Sequence: Met 1-Gln 208

Background:

The Fc receptor with low affinity for IgG (FCGR3, or CD16) is encoded by 2 nearly identical genes, FCGR3A and FCGR3B, resulting in tissue-specific expression of alternative membrane-anchored isoforms. FCGR3A, it is also known as CD16a, encodes a transmembrane protein expressed on activated monocytes/macrophages, natural killer (NK) cells, and a subset of T cells.

CD16a / FCGR3A is a receptor expressed on NK cells that facilitates antibody dependent cellular cytotoxicity (ADCC) by binding to the Fc portion of various antibodies. CD16a / FCGR3A also has a broader function. CD16a / FCGR3A is directly involved in the lysis of some virus-infected cells and tumor cells by NK cells, independent of antibody binding. Cross-linking of CD16a / FCGR3A on NK cells resulted in increased intracellular Ca²⁺ levels and a cascade of biochemical events similar to those activated by the T cell receptor. CD16a / FCGR3A on human NK cells is a lysis receptor that mediates the direct killing of some virus infected and tumor cells, independent of antibody ligation.