Recombinant Human CD16a/FCGR3A Protein (176 Phe, His&AVI Tag)



Catalog Number:PKSH030285

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description

Synonyms Low Affinity Immunoglobulin Gamma Fc Region Receptor III-A;CD16a

Antigen;Fc-Gamma RIII-Alpha;Fc-Gamma RIII;Fc-gamma

RIIIa;FcRIII;FcRIIIa;FcR-10;IgG Fc Receptor

III-2;CD16a;FCGR3A;CD16A;FCG3;FCGR3;IGFR3;CD16;CD16A

Species Human

Expression Host HEK293 Cells
Sequence Met 1-Gln 208
Accession P08637-1
Calculated Molecular Weight 25.1 kDa
Observed molecular weight 46 kDa
Tag C-His-Avi

Bioactivity Using the Octet RED System, the affinity constant (Kd) of CD16a bound to Human

IgG1 was 30nM.

Properties

Purity > 95 % as determined by reducing SDS-PAGE.

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

Storage Generally, 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 7.2

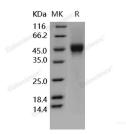
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

protectants before lyophilization.

Please refer to the specific buffer information in the printed manual.

Reconstitution Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

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;

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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.

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