

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



Catalog Number:PKSH030287

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

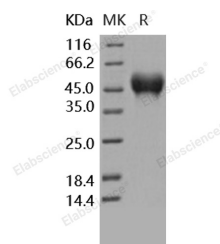
Description

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	23.3 kDa
Observed molecular weight	45-50 kDa
Tag	C-His
Bioactivity	Immobilized human CD16a-His at 10 µg/ml (100 µl/well) can bind biotinylated human IgG1, The EC50 of biotinylated human IgG1 is 0.90-2.30 µg/ml.

Properties

Purity	> 97 % 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 7.4 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



> 97 % 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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