

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



Catalog Number:PKSH030288

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

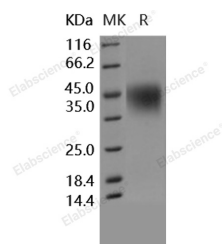
## Description

<b>Synonyms</b>	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
<b>Species</b>	Human
<b>Expression Host</b>	CHO Cells
<b>Sequence</b>	Met 1-Gln 208
<b>Accession</b>	AAH17865.1
<b>Calculated Molecular Weight</b>	23.3 kDa
<b>Observed molecular weight</b>	40-45 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Immobilized human CD16a-His at 10 µg/ml (100 µl/well) can bind recombinant human IgG1 (Fc). The EC50 of human IgG1 (Fc) is 0.40-0.92 µg/ml.

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	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.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	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.
<b>Reconstitution</b>	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 Ca<sup>2+</sup> 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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