

# Recombinant Human CD16a/FCGR3A Protein (His Tag)



Catalog Number:PKSH032419

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

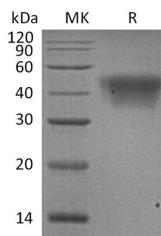
## Description

<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>	HEK293 Cells
<b>Sequence</b>	Gly17-Gln208
<b>Accession</b>	AAH17865.1
<b>Calculated Molecular Weight</b>	22.7 kDa
<b>Observed molecular weight</b>	35-50 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Loaded Human IgG1 Fc on Protein-A Biosensor, can bind Human CD16a-His with an affinity constant of 0.571 uM as determined in BLI assay.

## 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 a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
<b>Reconstitution</b>	Please refer to the specific buffer information in the printed manual for detailed information.

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

Receptors for the Fc region of immunoglobulin G (Fc $\gamma$ R) are divided into three classes and Fc $\gamma$ RIII is a multifunctional; low/intermediate affinity receptor. In humans; Fc $\gamma$ RIII is expressed as two distinct forms (Fc $\gamma$ RIIIA and Fc $\gamma$ RIIIB) that are encoded by two different but highly homologous genes in a cell type-specific manner. Fc $\gamma$ RIIIB is a low-affinity; GPI-

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linked receptor expressed by neutrophils and eosinophils; whereas Fc $\gamma$ RIIIA is an intermediate affinity polypeptide-anchored transmembrane glycoprotein expressed by a subset of T lymphocytes; natural killer (NK) cells; monocytes; and macrophages. The Fc $\gamma$ RIIIA receptor is involved in phagocytosis; secretion of enzymes; inflammatory mediators; antibody-dependent cellular cytotoxicity (ADCC); mast cell degranulation; and clearance of immune complexes. Fc $\gamma$ RIIIA has an immunoreceptor tyrosine-based activation motif (ITAM) in its cytoplasmic domain and delivers an activation signal in the immune responses. Aberrant expression or mutations in this gene is implicated in susceptibility to recurrent viral infections; systemic lupus erythematosus; and alloimmune neonatal neutropenia. In humans; it is a 50 -70 kD type I transmembrane activating receptor. The Fc $\gamma$ RIIIA cDNA encodes 254 amino acid including a 16aa signal sequence; 191 amino acid ECD with two C2-type Ig-like domains; five potential N-glycosylation sites; a 22 amino acid transmembrane sequence and a 25 amino acid cytoplasmic domain.

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