

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

Catalog Number: PKSH030285

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

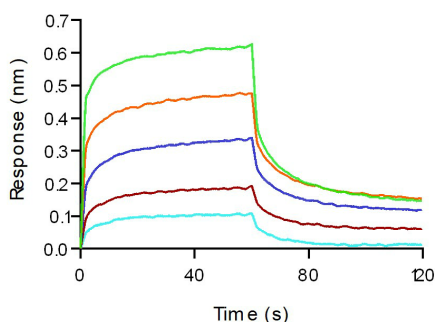
### Description

<b>Species</b>	Human
<b>Source</b>	HEK293 Cells-derived Human CD16a/FCGR3A(176 Phe) protein Met 1-Gln 208, with an C-terminal His & Avi
<b>Calculated MW</b>	25.1 kDa
<b>Observed MW</b>	46 kDa
<b>Accession</b>	P08637-1
<b>Bio-activity</b>	Using the Octet RED System, the affinity constant (Kd) of CD16a bound to Human IgG1 was 30nM.

### 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% Tween 80 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



Loaded Human FcγRIIIA / CD16a (F176) recombinant protein (Cat: PKSH030287) on His1K Biosensor, can bind Bevacizumab (IgG1) with an affinity constant of 3.6 µM as determined in BLI assay (ForteBio Octet Red384).

### Background

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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 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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