## **PRODUCT INFORMATION**

Expression system HEK293

**Domain** 18-208aa

**UniProt No.** P08637

**NCBI Accession No.** NP\_001121065.1

### **Alternative Names**

Low affinity immunoglobulin gamma Fc region receptor III-A, low affinity immunoglobulin gamma Fc region receptor III-A isoform c, IgG Fc receptor III-A, CD16-II, CD16a antigen, Fc-gamma RIII-alpha, Fc-gamma RIII, Fc-gamma RIIIa, FcRIIIa, FcRIIIa, FcgammaRIIIA, FcR-10, IgG Fc receptor III-2, CD16a, FCGR3A, CD16A, FCG3, FCGR3, FCGRIII, IGFR3, IMD20, CD16

## **PRODUCT SPECIFICATION**

# Molecular Weight

22.6kDa (197aa)

**Concentration** 0.5mg/ml (determined by Absorbance at 280nm)

### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

**Purity** > 95% by SDS-PAGE

**Endotoxin level** < 1 EU per 1ug of protein (determined by LAL method)

## **Biological Activity**

Measured by its binding ability in a functional ELISA with Human IgG1 Fc (CAT# ATGP4094).

## Tag

His-Tag

**Application** SDS-PAGE, Bioactivity

### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.



## BACKGROUND

### Description

Fc gamma RIIIA/CD16a is also known as Low affinity immunoglobulin gamma Fc region receptor III-A isoform c. It is optimally activated upon binding of clustered antigen-IgG complexes displayed on cell surfaces, triggers lysis of antibody-coated cells, a process known as antibody-dependent cellular cytotoxicity (ADCC). Also mediates IgG effector functions on natural killer (NK) cells. Binds antigen-IgG complexes generated upon infection and triggers NK cell-dependent cytokine production and degranulation to limit viral load and propagation. Involved in the generation of memory-like adaptive NK cells capable to produce high amounts of IFNG and to efficiently eliminate virus-infected cells via ADCC. Regulates NK cell survival and proliferation, in particular by preventing NK cell progenitor apoptosis. Fc gamma RIIIA is mediates the antitumor activities of therapeutic antibodies. Upon ligation on monocytes triggers TNFA-dependent ADCC of IgG-coated tumor cells. Recombinant human Fc gamma RIIIA/CD16a, fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

### Amino acid Sequence

MRTEDLPKAV VFLEPQWYRV LEKDSVTLKC QGAYSPEDNS TQWFHNESLI SSQASSYFID AATVDDSGEY RCQTNLSTLS DPVQLEVHIG WLLLQAPRWV FKEEDPIHLR CHSWKNTALH KVTYLQNGKG RKYFHHNSDF YIPKATLKDS GSYFCRGLFG SKNVSSETVN ITITQGLAVS TISSFFPPGY Q<HHHHHH>

### **General References**

Lee J., et al, (2015) Immunity. 42(3):431-442. DiLillo D.J., et al, (2014) Nat Med. 20(2):143-151. Warren H.S., et al, (1999) J Immunol. 162(2):735-742. Grier J.T., et al, (2012) J Clin Invest. 122(10):3769-3780.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

### **Biological Activity**

NKMAXBIO We support you, we believe in your research **Recombinant human CD16a/FCGR3A protein** 

Catalog Number: ATGP4098

Human IgG1 (ug/ml) 3.0 2.5 2.0 OD 450nm 1.5 1.0 0.5 0.0 10-4 10<sup>-3</sup> 10<sup>-2</sup> 10<sup>-1</sup> 10<sup>0</sup> 10<sup>1</sup> 10<sup>2</sup> 10<sup>3</sup> 10<sup>4</sup> Human Fc gamma RIIIA/CD16a is coated at 10 ug/ml (100 ul/well) can bind Human IgG1 Fc (CAT# ATGP4094) in a functional ELISA assay.