

Recombinant human CD16a/FCGR3A protein

Catalog Number: ATGP4098

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, FcRIII, FcRIIIa, Fc-gammaRIIIA, 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.

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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

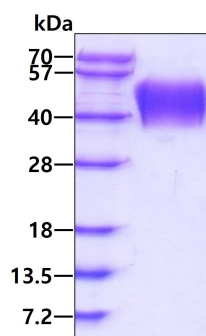
MRTEDLPKAV VFLEPQWYRV LEKDSVTLKC QGAYSPEDNS TQWFHNESLI SSQASSYFID AATVDDSGEY RCQTNLSTLS
DPVQLEVHIG WLLLQAPRWV FKEEDPIHLR CHSWKNTALH KVTYLRQNGKG RKYFHNSDF YIPKATLKDS GSYFCRGLFG
SKNVSSETVN ITITQGLAVS TISSFFPPGY Q<HHHHHH>

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

Recombinant human CD16a/FCGR3A protein

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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.

