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Recombinant human IgG1 Fc protein

Catalog Number: ATGP4094

PRODUCT INFORMATION

Expression system

HEK293

Domain

100-330aa

UniProt No.

P01857

NCBI Accession No.

CAC20454.1

Alternative Names

immunoglobulin heavy chain constant region gamma 1, IGHG1, Ig gamma-1 chain C region, Ig gamma-1 chain C region EU, Ig gamma-1 chain C region KOL, Ig gamma-1 chain C region NIE

PRODUCT SPECIFICATION

Molecular Weight

25.9kDa (231aa)

Concentration

1mg/ml (determined by BCA assay)

Formulation

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

Purity

> 90% by SDS-PAGE

Endotoxin level

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

Biological Activity

- 1. Measured by its binding ability in a functional ELISA with Human Fc gamma RIIIA/CD16a (CAT# ATGP4102). The ED50 range \leq 1.5 ug/ml.
- 2. Measured by its binding ability in a functional ELISA with Human Fc gamma RIIIA/CD16a (CAT# ATGP4116).
- 3. Measured by its binding ability in a functional ELISA with Human Fc gamma RIIIA/CD16a (CAT# ATGP4098). The ED50 range \leq 4 ug/ml.

Tag

Non-Tagged

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

Immunoglobulins are membrane-bound or secreted glycoproteins produced by B lymphocytes. IgG antibodies protect the body against the pathogens by agglutination and immobilization, complement activation, toxin neutralization, as well as the antibody-dependent cell-mediated cytotoxicity. IgG1 is most abundant in serum among the four IgG subclasses (IgG1, 2, 3 and 4) and binds to Fc receptors on phagocytic cells with high affinity. IgG comprise two identical light (L) and heavy (H) chains forming a 'Y-shaped' structure. It also is digested by pepsin proteolysis into two distinct fragments (Fab, Fc). Fc fragment is a homodimeric glycoprotein with one monomer consisting of two constant immunoglobulin domains (CH2, CH3) from the C-terminal half of one heavy chain. Through interaction with its ligands (Fc γ R, C1q and FcRn) it mediates various immune effector functions and increases the half-life of the antibody molecule. Recombinant IgG Fc is suggested to represent a potential anti-inflammatory drug for treatment of human autoimmune diseases. Recombinant human IgG1 Fc was expressed in HEK293 cell and purified by using conventional chromatography techniques.

Amino acid Sequence

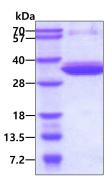
PKSCDKTHTC PPCPAPELLG GPSVFLFPPK PKDTLMISRT PEVTCVVVDV SHEDPEVKFN WYVDGVEVHN AKTKPREEQY NSTYRVVSVL TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP QVYTLPPSRD ELTKNQVSLT CLVKGFYPSD IAVEWESNGQ PENNYKTTPP VLDSDGSFFL YSKLTVDKSR WQQGNVFSCS VMHEALHNHY TQKSLSLSPG K

General References

Michael McHeyzer-Williams., et al, (2012) Nat. Rev. Immunol. 12:24-34. Schroeder H.W. Jr., et al, (2010) J. Allergy Clin. Immunol. 125:S41-S52. E D Carosella., et al, (1988) Cell Immunol. 112:262-270.

DATA

SDS-PAGE

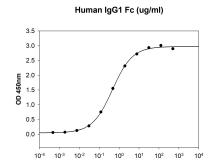


3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

Biological Activity

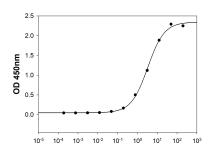
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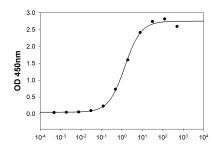
Human Fc gamma RIIIA/CD16a (CAT# ATGP4102) is coated at 10 ug/ml (100 ul/well) can bind Human IgG1 Fc. The ED50 range ≤ 1.5 ug/ml.





Human IgG1 Fc is coated at 1ug/ml (100 ul/well) can bind Human Fc gamma RIIA/CD32a (H167) (CAT# ATGP4116) in a Functional ELISA assay.

Human IgG1 (ug/ml)



Human Fc gamma RIIIA/CD16a (CAT# ATGP4098) is coated at 10 ug/ml (100 ul/well) can bind Human IgG1 Fc. The ED50 range \leq 4 ug/ml.

