

# 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.

# Recombinant human IgG1 Fc protein

Catalog Number: ATGP4094

## 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 (FcγR, 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

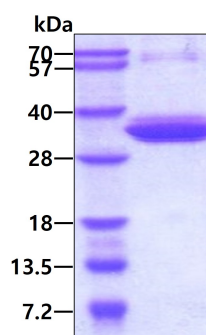
PKSCDKTHTC PPCPAPELLG GPSVFLFPPK PKDTLMISRT PEVTCVVVDV SHEDPEVKFN WYVDGVEVHN AKTKPREEQY NSTYRVVSVL TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP QVYTLPPSRD ELTKNQVSLT CLVKGFYPSD IAVEWESNGQ PENNYKTPP VLDSGDGFFL YSKLTVDKSR WQQGNVFSCS VMHEALHNHY TQKSLSLSPG K

### 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



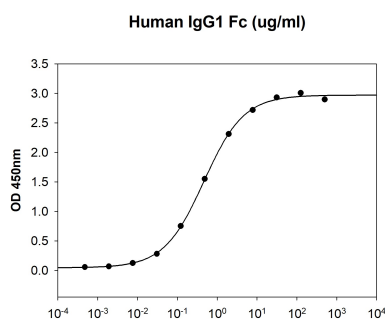
3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

### Biological Activity

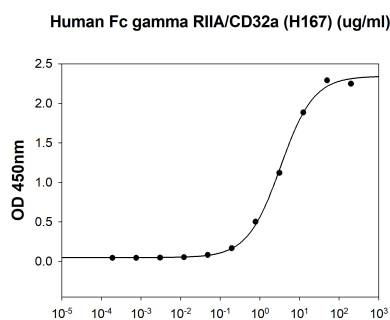
# Recombinant human IgG1 Fc protein

Catalog Number: ATGP4094

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

