

IgG1 hFc Protein, Human, Recombinant, Biotinylated

General Information

Synonyms:	g gamma-1 chain C region;g γ -1 chain C region;IGHG1
Protein Construction:	Asp104-Lys330(Asp239Glu,Leu241Glu)
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P01857
Molecular Weight:	33 KDa (reducing condition)
AA Sequence:	Asp104-Lys330(Asp239Glu,Leu241Glu)

QC Testing

Biological Activity:	1. Loaded Biotinylated Human IgG1 Fc-His-Avi on SA Biosensor, can bind Protein G-Fc with an affinity constant of <1 pM as determined in BLI assay. (Regularly tested) 2. Immobilized Biotinylated Human IgG1 Fc at $2\mu\text{g/ml}$ ($100\mu\text{l/well}$) can bind Recombinant Protein G. The ED50 of Recombinant Protein G is 49.41 ng/ml . (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	$<0.1\text{ ng}/\mu\text{g}$ ($1\text{ EU}/\mu\text{g}$) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a $0.22\mu\text{m}$ filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than $100\mu\text{g/ml}$. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C . For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

As a monomeric immunoglobulin that is predominately involved in the secondary antibody response and the only isotype that can pass through the human placenta, Immunoglobulin G (IgG) is synthesized and secreted by plasma B cells, and constitutes 75% of serum immunoglobulins in humans. 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 (ADCC). IgG tetramer contains two heavy chains (50 kDa) and two light chains (25 kDa) linked by disulfide bonds, that is the two identical halves form the Y-like shape. IgG is digested by pepsin proteolysis into Fab fragment (antigen-binding fragment) and Fc fragment ("crystallizable" fragment). IgG1 is most abundant in serum among the four IgG subclasses (IgG1, 2, 3 and 4) and binds to Fc receptors (FcγR) on phagocytic cells with high affinity.

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