Human IgG1-Fc Protein (103 Cys/Ser)

Catalog Number: **10702-HNAH**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

IgG1 Fc; Ighg1; IgG1; Igh-4; VH7183

Protein Construction:

A DNA sequence encoding the human IgG1 Fc region (AAC82527.1) (Glu 99-Lys 330) (one aa mutation,103 Cys/Ser) was expressed.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its ability to bind human CD16a-His (Cat:10389-H08H1) in a functional ELISA. 2. Measured by its ability to bind human CD16a-AVI-His (Cat:10389-H27H) in a functional ELISA. 3.Measured by its ability to bind human CD16a-His (Cat:10389-H08H) in a functional ELISA.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Glu 99

Molecular Mass:

The recombinant human IgG1 Fc consists of 232 amino acids and has a predicted molecular mass of 26 kDa. As a result of glycosylation, the apparent molecular mass of rhFc is approximately 32 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

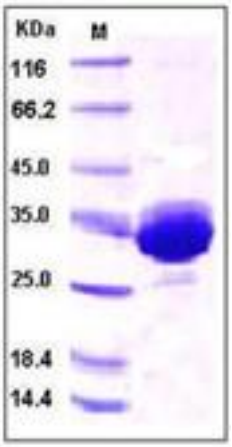
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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. Fc fragment is demonstrated to mediate phagocytosis, trigger inflammation, and target Ig to particular tissues. Protein G or Protein A on the surface of certain Staphylococcal and Streptococcal strains specifically binds with the Fc region of IgGs, and has numerous applications in biotechnology as a reagent for affinity purification. Recombinant IgG Fc Region is suggested to represent a potential anti-inflammatory drug for treatment of human autoimmune diseases.

References

1.Carosella ED. et al., 1988, Cell Immunol. 112: 262-70.
2.Eckle I. et al., 1990, Clin Exp Immunol. 81: 352-6.
3.Lorriaine C. et al., 1995, J Biol Chem. 270:8164-71.