

Mouse IgG1-Fc Protein (102 Cys/Ser)

Catalog Number: 10690-MNAH



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

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

Protein Construction:

The Fc region of mouse IgG1 (P01868-1) (Val 98-Lys 324) (one aa mutation, 102 Cys / Ser) was expressed and purified.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

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 °C

Predicted N terminal: Val 98

Molecular Mass:

The recombinant mouse IgG1 Fc consists of 227 amino acids and has a predicted molecular mass of 25.8 kDa. As a result of glycosylation, the apparent molecular mass of rmFc is approximately 32 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 100mM NaAc, 10mM NaCl, 200mM Tris, pH 7.5

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:

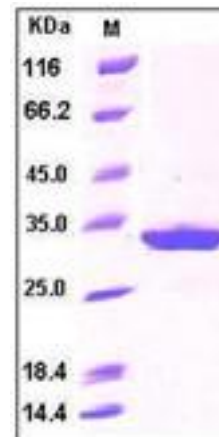
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.Lorriane C. et al., 1995, J Biol Chem. 270:8164-71.

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