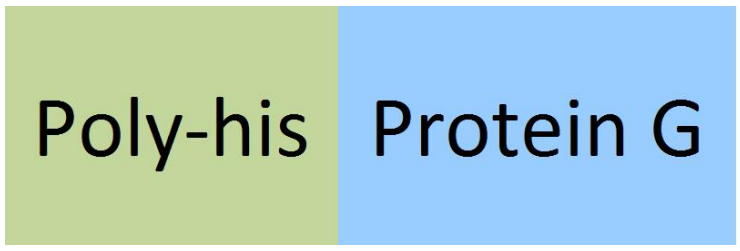
Synonym

RPG,Protein G

Source

Recombinant Protein G, His Tag, also known as Recombinant Streptococcus sp. Protein G was expressed in E. coli at ACROBiosystems.

Molecular Characterization



Recombinant Protein G, His Tag is fused with the polyhistidine tag at N-terminus and a single cysteine at C-terminus. The reducing (R) protein migrates as a 29 kDa polypeptide. Protein G Protein can bind to human IgG1 Fc.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>98% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in 100 mM NaH2PO4, pH8.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

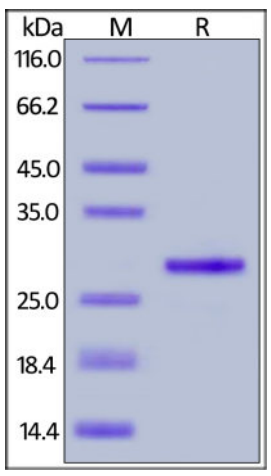
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

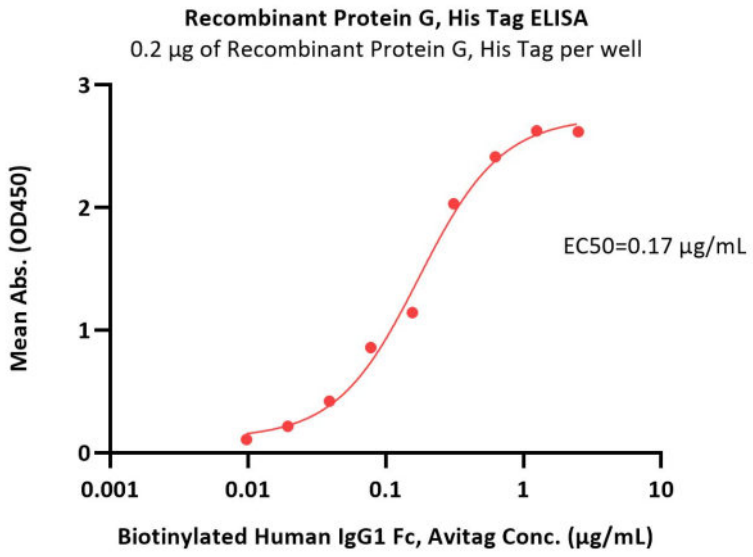
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Recombinant Protein G, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 98%.

Bioactivity-ELISA



Immobilized Recombinant Protein G, His Tag (Cat. No. RPG-S3140) at 2 μg/mL (100 μL/well) can bind Biotinylated Human IgG1 Fc, Avitag (Cat. No. IG1-H8213) with a linear range of 0.01-0.313 μg/mL (Routinely tested).

Background

Protein G is an immunoglobulin-binding protein expressed in group C and G Streptococcal bacteria much like Protein A but with differing specificities. It is a 65-kDa (G148 protein G) and a 58 kDa (C40 protein G) cell surface protein that has found application in purifying antibodies through its binding to the Fc region. The native molecule also binds albumin, however, because serum albumin is a major contaminant of antibody sources, the albumin binding site has been removed from this recombinant form of Protein G.

Clinical and Translational Updates