



GENEMED SYNTHESIS, INC.

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Protein G (Recombinant)

Cat# PRTG15-R-1	Recombinant (E.Coli) purified (>95%) Protein G	Size: 1 mg
Cat# PRTG15-R-10	Recombinant (E.Coli) purified (>95%) Protein G	Size: 10 mg
Cat# PRTG15-R-100	Recombinant (E.Coli) purified (>95%) Protein G	Size: 100 mg

Protein G is a bacterial cell wall protein isolated from group G *Streptococci*. Native Protein G contains two IgG-binding domains and sites for albumin and cell surface binding. The albumin and cell surface binding domains have been eliminated from purified Recombinant Protein G to reduce nonspecific binding and, therefore, can be used to separate IgG from crude samples. Optimal binding occurs at pH 5, although binding is also good at pH 7.0-7.2. Protein G has greater affinity than Protein A for most mammalian IgGs, it may be used for the purification of mammalian IgGs that do not bind well to Protein A. Protein G does not bind to human IgM, IgD and IgA.

Native protein is approx. 65-kda. It contains two albumin binding domains at the N-terminus and 3 IgG binding domains (~55-amino acids each) at the C-terminus. Recombinant protein G does not contain albumin binding domains. Differences in binding characteristics between Protein A and Protein G may be explained by the differing compositions in the IgG-binding sites of each protein, and sequence differences between Protein A and Protein G. Variations in isolation and purifications methods for Protein G may affect IgG binding, partially because there are differing numbers of IgG-binding sites on various sources of Protein G.

Form and Storage

Recombinant Protein G from Staphylococcus Group G is expressed in E. Coli and purified (>98%, mol wt ~23 kda but migrate as ~32 kda protein). The gene has been altered to remove the albumin binding domains. This does not affect the protein binding to IgG. It is supplied in liquid (see concn on the vial) or lyophilized in salt free form. The product has no detectable IgG or organism. Endotoxin (<0.5 EU/mg protein).

Reconstitute powder in water or buffer at a desired concentration. Store unopened vials at 4oC and the reconstituted protein at -20oC or below. Stability is at least 1 year in powder form and at least 6 months after reconstitution.

Binding Capacity

Binding capacity of the protein G : 1 mg binds 10-15 mg of human IgG. Binding of other species may be different.

This product is for in vitro research use only.

Related Items

Protein A and Protein G ELISA kits

Anti-Protein A and Protein G antibodies, HRP and Biotin conjugates

Protein A And Protein G-Agarose (Affinity matrix)

Pre-coated Protein A and Protein G ELISA plates

Cat#	Description	SIZE
PRTA11-R-1	Recombinant purified >98% Protein A 1 mg (E. Coli)	
PRTA11-R-100	Recombinant purified >98% (E. Coli) Protein A 100 mg	
PRTA11-R-5	Recombinant purified >98% Protein A 5 mg (E. Coli)	
PRTA12-A	Anti-Protein-A IgG	0.1 ml
PRTA13-A	Anti-Protein-A IgG, aff pure	100 ug
PRTA13-AB	Anti-Protein-A IgG-biotinylated, 0.1 ml	
PRTA13-HRP	Anti-Protein-A IgG-HRP conjugate, 100 ul	
PRTG15-R-1	Recombinant purified Protein G, 1 mg	
PRTG15-R-10	Recombinant purified Protein G, 10 mg	
PRTG15-R-100	Recombinant purified Protein G, 100 mg	
PRTG15-R-1-10-100		140609P

MSDS: This product is considered non-hazardous as defined by OSHA (CFR 1910.1200. Nov 25, 1983). It can be disposed of in the drain.