Recombinant Streptococcal Protein G

Cat. No. COP33 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant streptococcal protein G is produced in Escherichia coli using sequence from Streptococcus C1-C2-C3.
Species	Staphylococcus
Source	E.coli
Description	Recombinant streptococcal protein G lacking the albumin binding region thereby avoiding undesirable reactions with albumin, though the Fc binding domain is still present.
Molecular Mass	The Protein G contains amino acids 190-384 having a molecular mass of 21.6 kDa. The Protein-G migrates on SDS-PAGE around 32 kDa.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized white Powder containing no additives.
Purity	>95% as determined by SDS-PAGE and HPLC.
Amino Acid Sequence	MTYKLILNGKTLKGETTTEAVDAATAEKVFKQYANDNGVDGEWTYDDAT KTFTVTE KPEVIDASELTPAVTTYKLVINGKTLKGETTTEAVDAATAEKVFK QYANDNGVDGEW TYDDATKTFTVTEKPEVIDASELTPAVTTYKLVINGKTL KGETTTKAVDAETAEKAFK QYANDNGVDGVWTYDDATKTFTVTE.

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Specificity	a. Binds with greater affinity to most mammalian immunoglobulins than Protein A, including human IgG3 and rat IgG2a. b. Does not bind to human IgM, IgD and IgA.	
Reconstitution	Reconstitution with deionized water or PBS.	
Storage	After reconstitution, aliquot and store at -20°C. Avoid repeated freeze/thaw cycles.	
Applications	Protein G binds to the constant region of many species of immunoglobulin G. It can be used to detect, quantify and purify IgG antibodies and antibody/antigen complexes. Recombinant Protein G contains only IgG binding domains. The albumin-binding domain as well as cell wall and cell membrane binding domains have been removed to ensure the maximum specific IgG binding capacity.	
Background	Introduction	Streptococcus is a genus of spherical Gram-positive bacteria belonging to the phyl um Firmicutes and the lactic acid bacteria group. Certain Streptococcus species are responsible for many cases of meningitis, bacterial pneumonia, endocarditis, erysip elas and necrotizing fasciitis (the "flesh-eating" bacterial infections). However, ma ny streptococcal species are nonpathogenic, and form part of the commensal huma n microbiome of the mouth, skin, intestine, and upper respiratory tract. Furthermor e, streptococci are a necessary ingredient in producing Emmentaler ("Swiss") chee se.
	Keywords	RPG; Protein G; ProteinG; IgG binding protein G; IgG-binding protein G;Immuno globulin G binding protein G [Precursor]; spg

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