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### Staphylococcal Protein A, 41-kDa Recombinant RECOMBINANT PROTEIN

**Catalog Number:** PRP-649  
**Quantity:** 10 milligrams, 100 milligrams, 1 gram  
**Format:** Sterile-filtered white lyophilized (freeze-dried) powder  
**Host:** *E. coli*

#### **Background:**

Protein A is a cell-wall protein derived from *Staphylococcus aureus* which has unique binding properties to a variety of mammalian species of IgG. It can also bind some IgM and IgA. Protein A binds the Fc region of immunoglobulins through interaction with the heavy chain. It can be coupled to a variety of reporter molecules, such as fluorescent dyes, enzyme markers, biotin, colloidal gold, and radioactive iodine without affecting the antibody binding site. The recombinant version of protein A was developed to increase the specificity for IgG.

#### **Specificity and Preparation:**

The recombinant protein A is produced by expressing a modified protein A gene in *E. coli*. It is a non-glycosylated, polypeptide chain containing the amino acid sequence of Staphylococcal protein A IgG binding domains and having a molecular mass of 41 kDa. The recombinant protein A contains six IgG-binding regions of protein A. The cell-wall binding region, albumin binding region and other non-specific binding regions have been eliminated from the recombinant protein A to ensure maximum specific IgG binding. The protein was lyophilized from a concentrated (1mg/ml) solution containing no additives. Purity is greater than 98% as determined by SDS-PAGE and RP-HPLC. Human IgG is not used in the purification of protein A. This protein A does not contain endotoxin that is frequently found in native protein A.

#### **Usage and Storage:**

Activity is reported effective at 7 mg human IgG/mg protein A.  
The protein must be stored at 4°C at all times. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

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