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### **Protein A/G Recombinant RECOMBINANT PROTEIN**

**Catalog Number:** PRP-646PRO  
**Quantity:** 1 milligram, 10 milligrams, 100 milligrams  
**Format:** Lyophilized  
**Host:** *E. coli*

#### **Background:**

This recombinant protein joins the IgG binding domains of both protein A and protein G. It includes four Fc binding domains from protein A and two from protein G, yielding a final molecular weight of 50.4 kDa. Protein A/G binds to all subclasses of human IgG, IgA, IgE, IgM, and IgD. It also binds to all subclasses of mouse IgG excluding mouse IgA, IgM, and serum albumin. Mouse monoclonal antibodies usually have a stronger affinity to the chimeric protein A/G than to either protein A or protein G. Protein A/G has also been used for the purification of macaque IgG.

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

The recombinant protein A/G consists of seven IgG-binding domains (EDABC-C2C3) which correspond to the protein A and protein G domains that are included in the recombinant sequence. The protein A portion is from *Staphylococcus aureus* segments E, D, A, B, and C. The protein G portion is from *Streptococcus* segments C2 and C3. The fusion protein has a predicted molecular weight of 50.4 kDa, but migrates with an apparent molecular weight of 45 kDa in SDS-PAGE. The extinction coefficient of Protein A/B Recombinant is 0.574. The purity is greater than 95% as determined by SDS-PAGE and RP-HPLC.

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

Protein A/G is reported to be an excellent tool for the purification and detection of mouse monoclonal antibodies from IgG subclasses without interference from other serum proteins. Individual subclasses of mouse monoclonals are most likely to have stronger affinity to this chimeric protein than to either protein A or protein G alone. Binding to the fusion protein is less dependent on pH than binding to either protein A or protein G alone, with strong binding from pH 5-8.

Reconstitute lyophilized protein with deionized water or PBS. After reconstitution, aliquot and store at -20°C. Avoid repeated freezing and thawing. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

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