# Technical Data Sheet

## Recombinant Protein A

| | |
|---|---|
| Catalog Number: | PB0789 |
| Source: | *Escherichia coli* |
| Molecular Weight: | Protein A is a cell wall component produced by several strains of *Staphylococcus* aureus that consists of a single polypeptide chain and contains little or no carbohydrate. Recombinant Protein A is produced in *E.Coli* and functions essentially the same as native Protein A. It consists of 5 IgG-binding domains E-D-A-B-C aligned in series. It migrates with an apparent molecular mass of 45kDa in SDS-PAGE. |
| Quantity: | 5mg/100mg/1.0g |
| Purity: | >95% by SDS-PAGE analyses. |
| $A_{280}$ of 0.1% solution: | ~0.165 |
| Specificity: | The interaction between Protein A and IgG is not equivalent for all species. Even within a species, Protein A interacts with some subclasses of IgG and not others. For instance, human $IgG_1$, $IgG_2$ and $IgG_4$ bind strongly, while $IgG_3$ does not bind. There are also many instances in which monoclonal antibodies do not bind to Protein A, especially the majority of rat immunoglobulins and mouse $IgG_1$. |
| Applications: | The Protein A molecule contains four high-affinity ($K_a$ =$10^8$/mole) binding sites capable of interacting with the Fc region from IgG of several species including human and rabbit (Table 1). Optimal binding occurs a pH 8.2, although binding is also good at neutral or physiological conditions (pH 7.0-7.6). |
| Physical Appearance: | Sterile Filtered White lyophilized (freeze-dried) powder. |
| Formulation: | Lyophilized with no additive. |
| Endotoxin: | Less than 0.1EU/ug of Protein A as determined by LAL method. |
| Reconstitution: | Dissolve in distilled water or saline. |
| Storage: | 2 years at -20°C. After reconstitution, aliquot and store at -20°C. Avoid repeated freeze/thaw cycles. |
| Usage: | This material is offered by for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. |

20 Konrad Cres, Markham Ontario L3R 8T4 Canada
Tel: (905) 474 4493, (800) 313 7224 Fax: (905) 474 5794
Email: order@biobasic.com Web: www.biobasic.com