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# Recombinant Staphylococcus aureus Protein A Protein

**Catalog No.: RPT0019** Recombinant

## Sequence Information

| Species | Gene ID | Swiss Prot |
|---|---|---|
| Staphylococcus aureus | 3919448 | P02976 |

**Tags**

**Synonyms**
Staphylococcal Protein A□SPA□IgG-binding protein A□Immunoglobulin G-binding protein A

## Product Information

| Source | Purification |
|---|---|
| *E. coli* | ≥ 90 % as determined by SDS-PAGE. |

| Calculated MW | Observed MW |
|---|---|

**Endotoxin**
Please contact us for more information.

**Formulation**
It is recommended that sterile water (500μL) be added to the vial to prepare a stock solution of 20.00 mg/mL. Concentration is measured by BCA. It is recommended that the protein be aliquoted and be used as soon as possible. Avoid repeated freeze-thaw cycles.

**Reconstitution**
It is recommended that sterile water (500μL) be added to the vial to prepare a stock solution of 20.00 mg/mL. Concentration is measured by BCA. It is recommended that the protein be aliquoted and be used as soon as possible. Avoid repeated freeze-thaw cycles.

## Contact


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## Background

Staphylococcal Protein A, or SPA, is a type I membrane protein covalently linked to the cell wall of most strains of the Gram-positive bacterium Staphylococcus aureus. It has high affinity to IgG from various species, for instance human, rabbit and guinea pig but only weak interaction with bovine and mouse. Protein A interacts with antibodies through two distinct binding events: the “classical” binding site on the Fc portion of human IgG1, IgG2, and IgG4, and the “alternate” binding site found on the Fab portion of human IgG, IgM, IgA, and IgE that contain heavy chains of the VH3 subfamily. The most reported molecular weight of protein A from Staphylococcus aureus is about 42,000. The recombinant Streptococci protein A consists of 299 amino acids and has a predicted molecular mass of 33.8 kDa as estimated by SDS-PAGE. Protein A consists of three regions: S, being the signal sequence that is processed during secretion; five homologous IgG binding domains E, D, A, B and C and a cell-wall anchoring regionXM. The truncated protein lacking region X has a molecular weight of about 31kD. The domains are independently capable to bind to the Fc-part of IgG1, IgG2 and IgG4, but shows only weak interaction with IgG3. In addition, all native protein A domains show comparable Fab binding. The binding site for the Fc part of the IgG molecule has been determined in a study of the B domain. The properties of protein A enables it as a powerful affinity ligand for several immunological and purification applications. High selectivity and good physiochemical stability have made protein A the preferred generic ligand for affinity purification of antibodies and molecules tagged with an antibody Fc-region. Protein A can also be used in various immunochemical assays including Western blotting, immunohistochemistry, and ELISA applications by conjugation with different reporter molecules, such as fluorescent dyes (FITC), enzyme markers (peroxidase, β-galactosidase, alkaline phosphatase), biotin, and colloidal gold. Immunoprecipitation studies with protein A conjugated to beads are also commonly used to purify proteins or protein complexes indirectly through antibodies against the protein or protein complex of interest.

## Basic Information

**Description**
Recombinant Staphylococcus aureus Protein A is produced by E. coli expression system.

**Bio-Activity**

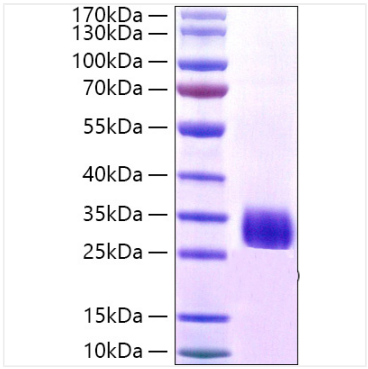
**Shipping**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Storage**
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

**Operational Notes**
For your safety and health, please wear a lab coat and disposable gloves for handling.

* 为了您的安全和健康，请穿实验服并戴一次性手套操作。

## Validation Data




Recombinant Staphylococcus aureus Protein A Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.