

## Staphopain A Protein, *S. aureus*, Recombinant (His & Myc)

### General Information

Synonyms:	Staphopain A; scpA; Staphylopain A; Staphylococcal cysteine proteinase A; sspP
Protein Construction:	215-388 aa
Species:	<i>Staphylococcus aureus</i>
Expression Host:	<i>E. coli</i>
Accession:	P81297
Molecular Weight:	27.4 kDa (predicted)
AA Sequence:	YNEQYVVKLENFKIRETQGNNGWCAGYTMSALLNATYNTNKYHAEAVMRFLHPNLQGQQFQFTGLTPREM IYFEQTQGRSPQLLRMTTYNEVDNLTKNNKGIAILGSRVESRNGMHAGHAMAVVGNAKLNNNGQEVIIIWNP WDNGFMTQDAKNNVIPVSNGDHYQWYSSIIYGY

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Cysteine protease that plays an important role in the inhibition of host innate immune response. Cleaves host elastins found in connective tissues, pulmonary surfactant protein A in the lungs, and the chemokine receptor

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CXCR2 on leukocytes. Proteolytic cleavage of surfactant protein A impairs bacterial phagocytosis by neutrophils while CXCR2 degradation blocks neutrophil activation and chemotaxis. Additionally, promotes vascular leakage by activating the plasma kallikrein/kinin system, resulting in hypotension.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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