



# IBT BIOSERVICES

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## *Staphylococcus aureus* Alpha Hemolysin (Hla)

**Catalog #:** 1401-002

**Lot #:** 1805010

**Description:** *Staphylococcus aureus* alpha hemolysin (Hla), also known as alpha toxin ( $\alpha$ -toxin), is expressed in *E. coli* as a recombinant protein without TAG. The theoretical molecular weight of the protein is approximately 33 kDa.

**Supplied:** 100  $\mu$ g is supplied in phosphate buffered saline at a concentration of 1.348 mg/mL.

**Endotoxin:** 5.165 Endotoxin units/mg

**Storage:** -80°C

**Relevance:** Hla is produced by *S. aureus* and is a major cytotoxic agent. It is expressed as a monomer that binds to the membrane of susceptible cells. Subunits then oligomerize to form heptameric rings with a central pore through which cellular contents leak. The mode of action of *S. aureus* Hla is likely by osmotic lysis.

### Recommended Dilutions:

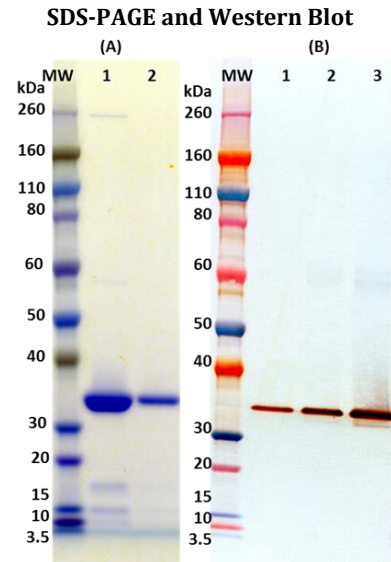
**ELISA:** Assay-dependent dilution.

**WB:** Assay-dependent dilution; internal QC demonstrates detection of Hla protein using IBT's mouse anti-Alpha Toxin (6C12) monoclonal antibody (cat# 0210-005) in Western blotting.

**Cytotoxicity assay:** The protein is active in functional lysis assays with rabbit red blood cells. The protein can be also used in serology assay as coating antigen to detect antibodies against Hla.

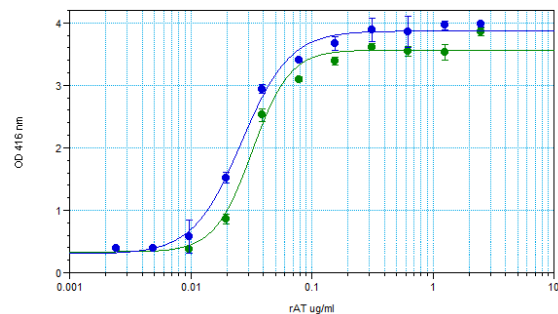
**For additional *S. aureus* products, please visit:**

<http://www.ibtbioservices.com/reagents/staphylococcus/>



(A) SDS-PAGE of Hla: 5  $\mu$ g (lane 1) and 1  $\mu$ g (lane 2). (B) Western blot detection of Hla at 5 ng, 10 ng and 50 ng (lanes 1-3), using IBT's mouse anti-Alpha Toxin (6C12) monoclonal antibody at 1.0  $\mu$ g/mL and an anti-mouse IgG-HRP conjugate followed by TMB membrane substrate.

### Hemolytic Activity



Lysis of rabbit red blood cells by *S. aureus* Hla. Red blood cell lysis was determined by absorbance at OD 416 nm after 30 min incubation at 37°C with Hla. EC<sub>50</sub> values were found to be 0.0262  $\mu$ g/mL for lot 1805010 (blue circles) and 0.0322  $\mu$ g/mL for previous lot 1805007 (green circles).

**Intended for research use only, not for human, therapeutic, or diagnostic applications.**

*The buyer cannot sell or otherwise transfer this product for Commercial Purposes without written approval of Integrated BioTherapeutics, Inc.*

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