



IBT BIOSERVICES

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Staphylococcus aureus Alpha Hemolysin (Hla)

Catalog #: 1401-002

Lot #: 1910004

Description: *Staphylococcus aureus* alpha hemolysin (Hla), also known as alpha toxin (α -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 μ g is supplied in phosphate buffered saline and 20% glycerol, at a concentration of 1.489 mg/mL.

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.

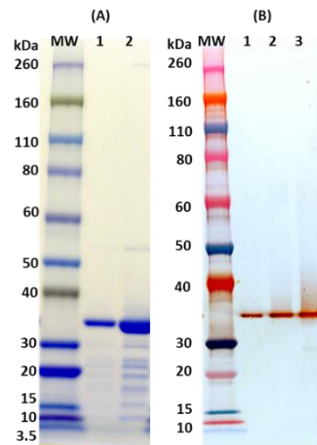
WB: Assay-dependent dilution; internal QC demonstrates detection of Hla protein using IBT's mouse anti-Alpha Toxin (6C12) monoclonal antibody (cat# 0210-005) in Western blotting.

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:

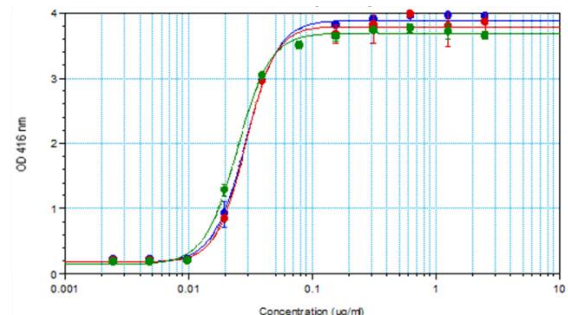
<http://www.ibtbioservices.com/reagents/staphylococcus/>

SDS-PAGE and Western Blot



(A) SDS-PAGE of Hla: 1 μ g (lane 1) and 5 μ g (lane 2). (B) Western blot detection of Hla at 5 ng (lane 1), 10 ng (lane 2), and 50 ng (lane 3), using IBT's mouse anti-Alpha Toxin (6C12) monoclonal antibody at 1.0 μ 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. EC₅₀ values were found to be 0.0248 μ g/mL for lot 1910004 (green circles) and 0.029 μ g/mL for previous lots 1805010 (blue circles) and 0.0289 μ g/mL for 1810002 (red circles)

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