Active Native Staphylococcus aureus α-Hemolysin

Cat. No. Hla-02S **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Native Staphylococcus aureus α-Hemolysin, sodium citrate buffer as balance.
Species	Staphylococcus aureus
Description	α-Hemolysin, a pore-forming cytotoxin is an extracellular protein secreted by most strains of pathogenic Staphylococcus aureus. It is secreted as a water-soluble monomer and is a small β-barrel protein. α-Hemolysin is selectively hemolytic and the monomeric form binds to a membrane and specific receptors are not required for binding. Upon binding to biological membranes and/or artificial membranes, self-oligomerization occurs, resulting in ring structures (hexameric aggregates) believed to represent transmembrane pores, which are permeable to ions and small metabolites. It has a marked preference for rabbit red blood cells. α-hemolysin stimulates cellular phospholipases and induces a Ca2+ influx. It leads to membrane disruption of the endothelial barrier and leakage of cytoplasmic components and osmotic lysis of the cells. α-hemolysin is implicated in the pathogenesis of sepsis.
Form	Lyophilized powder
Bio-activity	≥10, 000 units/mg protein
Purity	Protein ~60 % by Lowry
Applications	α-Hemolysin from Staphylococcus aureus has been used: 1. As a component of electrolyte solution for testing pore formation in lipid bilayer using electrophysiological

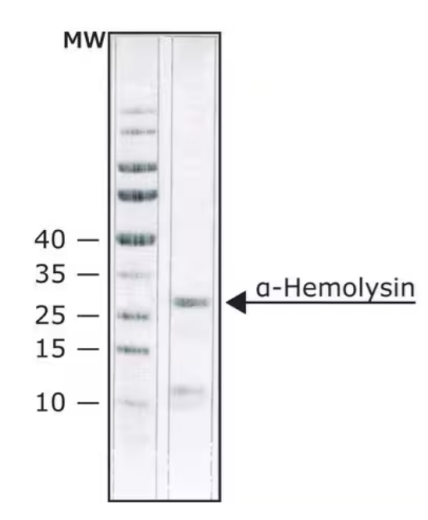
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	measurements; 2. To test its osteogenesis suppressive effects in bone marrow stromal cells (BMSCs); 3. In the preparation of α-hemolysin molecular imprinted polymer (MIP) for Biacore and surface plasmon resonance. α-Hemolysin was used in a study to test the efflux pump and haemolysin activity of Escherichia coli of dairy origin. It was also used to test its adaptation to benzalkonium chloride and the effect of ciprofloxacin on biofilm formation.
Storage	2-8 centigrade
CAS No.	94716-94-6
Unit Definition	One hemolytic unit will cause 50% lysis of a 1% suspension of rabbit red blood cells in phosphate buffered saline, pH 7.0, containing 1% bovine serum albumin after 30 min at 37 centigrade followed by refrigeration for 30 min at 4 centigrade.
Solubility	H2O: soluble 0.49-0.51 mg/mL

GENE INFORMATION

Gene Name	SAOUHSC_01121 alpha-hemolysin [Staphylococcus aureus subsp. aureus NCTC 8325]
Official Symbol	SAOUHSC_01121
Synonyms	SAOUHSC_01121; alpha-hemolysin; alpha-hemolysin precursor; α-Toxin; hly; Alpha-hemolysin; Alpha-HL; Alpha-toxin; hla
Gene ID	3920722
Protein Refseq	YP_499665

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UniProt ID	Q2G1X0
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