Recombinant Streptolysin O (Hemolytic Streptococcus), Active

Cat. No. STR-583 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Streptolysin O, highly purified from E. coli over-expressing SLO of Group C hemolytic Streptococci (6xHis-tagged to the signal peptide removed N-terminal of SLO). Functional in membrane pore formation to introduce molecules into living animal cells.
Background	Group A Streptococci (GAS) are important human pathogens and millions of children each year develop GAS pharyngitis. Although throat infection is typically benign, it can be complicated by the development of acute and chronic rheumatic heart disease. Invasive GAS infection occurs less frequently than pharyngitis but causes significantly more morbidity (Stevens, 1996). GAS produce two hemolysins (hemolytic exotoxins) that may contribute to pathogenesis. These are streptolysin O (SLO; slo), which is oxygen-labile, and streptolysin S (SLS; sagA), which is oxygen-stable. SLO is part of the thiol-activated cytolysin family. It is hemolytically active only in a reversibly reduced state. Partly as a function of its size it is antigenic, so its antibody antistreptolysin O can be detected in an antistreptolysin O titre. SLO mainly affects the breaking of red blood cells (hemolysis) and is mostly produced by the GAS and Streptococcus dysgalactiae. SLO interacts with cholesterol in the membrane of eukaryotic cells (mainly red and white blood cells, macrophages, and platelets) and usually results in β-hemolysis under the surface of blood agar. It targets myocardial cells, epithelial cells, platelets, and neutrophils and is thought to prevent the host immune system from clearing infection. The cytotoxic effects of SLO may also protect GAS from phagocytic killing and enhance bacterial virulence, particularly of strains that may be relatively deficient in hyaluronic acid capsule (Sierig et al., 2003).

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Purity	Purified from E. coli to greater than 98% (by SDS-PAGE)
Formulation	Presented in PBS (-), 1 mM DTT, 50% glycerol, sterilized by filtration. No additive nor carrier protein.
Type	Recombinant
ClassID 1	Infectious Disease

GENE INFORMATION

Synonyms	Streptolysin O (Hemolytic Streptococcus)

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