

## Streptolysin O (Hemolytic streptococcus)

01-531 20 u g

Streptolysin O (SLO) is a membrane-damaging extracellular toxin produced by hemolytic streptococci. The membrane-damaging activity is measured by hemolysis of red-blood cell. SLO is oxygen-sensitive and is easily inactivated in its presence but can be reactivated by thiol compounds, so it is also called thiol-activated cytolysin (2). SLO is produced not only by Group A hemolytic streptococci but also by Group C and Group G strains. The amino acid sequences are highly conserved among them and their homology is over 98%.

The product was highly purified from E.coli over-expressing SLO of Group C hemolytic streptococci. The specific activity is as high as 1,900,000 hemolytic units (HU) /mg and forms a big hole on the cell membrane, which enables the introduction of protein inside the cells in vivo (Ref.1).

### Applications

- 1) Antigen for the measurement of anti-streptolysin O antibody (ASO) ( diagnostic reagent ).
- 2) Reagent for membrane pore formation to introduce small to macromolecules into living cells (Ref.1) or deplete intracellular ATP (Ref.3).

### Specifications

Measurement of the activity: Definition of 1HU is the activation of 50% hemolysis on 3% sheep red blood cell

Purity: Over 98% is SLO by SDS-PAGE

Form: 1 mg/ml in PBS (-), 1 mM DTT, 50% glycerol, filtered-sterile

Storage: -20°C (long period, -70°C). Inactivated SLO can be reactivated by thiol reagents such as 20 mM cysteine or 10 mM DTT (Ref.2)

### References: This product has been used in Ref. 3

1. Walev I. et al. Delivery of proteins into living cells by reversible membrane permeabilization with streptolysin-O, PNAS, 98:3185 (2001)
2. M. Palmer: The family of thiol-activated, cholesterol-binding cytolysins. *Toxicon*, 39, 1681-1689 (2001).
3. Maeda Y. et al. GPHR is a novel anion channel critical for acidification and functions of the Golgi apparatus. *Nature Cell Biol.* 10:1135-45(2008)

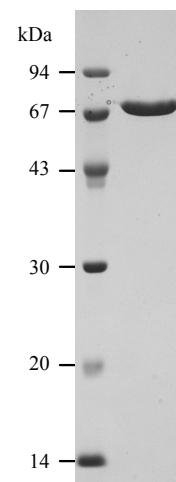


Figure. SLO analyzed by SDS-PAGE.

\*This product is for research use only, not for human use. It should be handled carefully to avoid injection (mouse LD50, 8 ug/kg)

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