Streptolysin (HAB-003): sc-58049



The Power to Question

BACKGROUND

Streptococcus bacteria produce the pore-forming exotoxin Streptolysin. This toxin binds to cholesterol-containing eukaryotic cell membranes and selectively permeabilizies the host cell membrane. When Streptolysin links to cholesterol to form an approximately 30 nm diameter channel in the cell membrane, nonosmotic lysis follows. This sulfhydryl-activated toxin also modulates hemolytic activity. Thermolabile and immunogenic, Streptolysin is reversibly inactivated by oxidation. In addition, it activates human polymorphonuclear neutrophils (PMNs) to further exaggerate host responses. Two of the most important streptolysins, Streptolysin 0 and S, accumulate in infected patients. Levels of these streptolysins are normally monitored as an indication of patient inflammation.

REFERENCES

- 1. Miyoshi-Akiyama, T., Takamatsu, D., Koyanagi, M., Zhao, J., Imanishi, K. and Uchiyama, T. 2005. Cytocidal effect of *Streptococcus* pyogenes on mouse neutrophils *in vivo* and the critical role of Streptolysin S. J. Infect. Dis. 192: 107-116.
- Kimoto, H., Fujii, Y., Hirano, S., Yokota, Y. and Taketo, A. 2005. Expression
 of recombinant Streptolysin O and specific antibody production. J. Mol.
 Microbiol. Biotechnol. 10: 64-68.
- 3. Velázquez, B., Massaldi, H., Battistoni, J. and Chabalgoity, J.A. 2005. Construction and expression of recombinant Streptolysin O and preevaluation of its use in immunoassays. Clin. Diagn. Lab. Immunol. 12: 683-684.
- 4. Yang, W.S., Park, S.O., Yoon, A.R., Yoo, J.Y., Kim, M.K., Yun, C.O. and Kim, C.W. 2006. Suicide cancer gene therapy using pore-forming toxin, Streptolysin O. Mol. Cancer Ther. 5: 1610-1619.
- Nilsson, M., Sorensen, O.E., Morgelin, M., Weineisen, M., Sjobring, U., and Herwald, H. 2006. Activation of human polymorphonuclear neutrophils by Streptolysin O from *Streptococcus* pyogenes leads to the release of proinflammatory mediators. Thromb. Haemost. 95: 982-990.
- Husmann, M., Dersch, K., Bobkiewicz, W., Beckmann, E., Veerachato, G. and Bhakdi, S. 2006. Differential role of p38 mitogen activated protein kinase for cellular recovery from attack by pore-forming *S. aureus* alphatoxin or Streptolysin O. Biochem. Biophys. Res. Commun. 344: 1128-1134.
- 7. Blyth, C.C. and Robertson, P.W. 2006. Anti-streptococcal antibodies in the diagnosis of acute and post-streptococcal disease: streptokinase versus streptolysin O and deoxyribonuclease B. Pathology 38: 152-156.
- 8. Michos, A., Gryllos, I., Håkansson, A., Srivastava, A., Kokkotou, E. and Wessels, M.R. 2006. Enhancement of Streptolysin O activity and intrinsic group A streptococcal toxin, NAD-glycohydrolase. J. Biol. Chem. 281: 8216-8223.
- 9. Stassen, M., Valeva, A., Walev, I. and Schmitt, E. 2006. Activation of mast cells by Streptolysin O and lipopolysaccharide. Methods Mol. Biol. 315: 393-403.

SOURCE

Streptolysin (HAB-003) is a mouse monoclonal antibody raised against cysteine chloride oxidized Streptolysin.

PRODUCT

Each vial contains 100 $\mu g\ lgG_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Streptolysin (HAB-003) is recommended for detection of oxidized streptolysin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with untreated streptolysin .

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com