

Native Streptococcus Pyogenes Cells, Heat-Inactivated

Cat. No. STR-582 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Heat-killed Streptococcus pyogenes cells in dextran solution. Antigen is intended for use as a positive control in immunoassay development for Streptococcus detection.

Background

Streptococcus pyogenes (group A beta-hemolytic streptococcus; GAS) is a Gram-positive, catalase-negative cocci which can be carried asymptotically. Streptococcus pyogenes is a bacterium which can colonise the throat, skin and anogenital tract and can cause both noninvasive and invasive disease, as well as nonsuppurative sequelae. It causes a diverse range of skin, soft tissue and respiratory tract infections including some life-threatening infections e.g. scarlet fever, bacteremia, pneumonia, necrotizing fasciitis, myonecrosis and Streptococcal Toxic Shock Syndrome (StrepTSS). Each year, the bacterium affects 700 million people globally, leading to 160,000 deaths. Streptococcal disease is ordinarily spread by direct person-to-person contact. In cases of pharyngitis and respiratory infections, droplet nuclei of saliva or nasal secretions are the mode of spread. Crowding such as occurs in schools or military barracks favors interpersonal spread of the organism in community outbreaks. Fomites can also be a source of streptococcal transmission (Chowdhury et al., 2021).

S. pyogenes is a gram-positive, β -hemolytic streptococcus that is catalase negative. More than 150 different strains have been identified based on different M-protein types. It is a group A streptococcus based on its carbohydrate structure, according to Lancefield typing of β -hemolytic strains. Muroid strains are rich in hyaluronic acid capsule, and numerous extracellular toxins are produced by most strains, which include streptolysin O, a cholesterol-specific cytolysin, streptolysin S, a cell-associated hemolysin, fibrinogen-binding proteins, streptokinase, numerous

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pyrogenic exotoxins that act as superantigens, and a cysteine-protease called pyrogenic exotoxin B.

Notes

This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Type

Native

ClassID 1

Infectious Disease

GENE INFORMATION**Synonyms**

Streptococcus Pyogenes

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