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Rabbit Anti Streptococcus mutans-FITC ANT0088

200µl

Description

Streptococcus mutans is a Gram-positive bacterium that lives in the mouth. The bacterium metabolizes different kinds of carbohydrates, creating an acidic environment in the mouth as a result of this process. This acidic environment in the mouth is what causes the tooth decay. *S. mutans* is considered to be the most cariogenic of all of the oral Streptococci [1].

S. mutans is very important to study, not only because virtually everyone in the world carries it, but also because it has various symptoms that affect our daily lives. As the bacteria develop in the mouth, they cause tooth destruction, impaired speech, difficulty chewing, multiple infections, psychological problems such as low self-esteem, poor social interactions, concentration problems, etc. Though not fatal, tooth decay is one of the most common infectious diseases in humans. Also, cavities caused by the bacteria are the reason for half of all dental visits in the U.S. [2].

The bacteria are most concentrated in the crevices, pits, and fissures that are a normal part of the teeth and surrounding structures. Adults may have a high concentration of *S. mutans* in their mouths. In contrast, infants and children have a smaller concentration, but they are more vulnerable to the bacteria [3]. One of the important virulence properties of these organisms is their ability to form biofilms known as dental plaque on tooth surfaces. Biofilms are sessile bacterial communities adherent to a surface, and their formation occurs in response to a variety of environmental cues. *S. mutans* undergoes a developmental program in response to environmental signals that leads to the expression of new phenotypes that distinguish these sessile cells from planktonic cells (4). Microbiological studies have been conducted in particular in patients undergoing treatment for cancer. Radiotherapy-caused hyposalivation may affect the oral microbiota. Variations in quantity, complexity, and quality of the oral microbiota also occur during chemotherapy, leading to a major imbalance of the ecosystem (5).

Product type	Polyclonal antibody conjugated with FITC
Immunogen	<i>S. mutans</i> ATCC 25175 1010 cells inactivated in glutaraldehyde 2.5%/v
Source	Rabbit
Reacts with	<i>Streptococcus oralis</i>
Specificity	<i>Streptococcus oralis</i> ; not cross-react against <i>S. mutans</i> ATCC 25175; <i>P. gingivalis</i> ATCC 33277; <i>F. nucleatum</i> ATCC 25586 [6].
Tested applications	FACS; Confocal laser scanning microscopy;
Recommended dilutions	Recommended starting dilutions can vary lot-to-lot. Consult the product information label in the package for lot specific values Note: When using any primary antibody or fluorescence-labelled secondary antibody for the first time, titrate out the antibody to determine which dilution allows the strongest specific signal with the lowest background for your sample [6].
Purity	Polyclonal immunoglobulins purified by protein A affinity chromatography.
Form	Liquid. Supplied in PBS. Neutral pH.
Storage	Shipped at +4°C. When stored at +4°C, the antibody is stable for 18 months. For extended storage, the solution may be frozen at -20°C in working aliquots. Note: Avoid repeated freezing and thawing cycles. Avoid exposure to light.

Reference

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