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## Rabbit Anti *Streptococcus oralis* ANT0083

### 200µl

#### Description

*S. oralis* is a gram positive, non-motile, α-haemolytic bacterium that form chains of cocci. *Streptococcus oralis* is a commensal bacteria and is found in the human oral cavity [1]. *S. oralis* is a component of the normal human oral microbiota, and is capable of opportunistic pathogenicity.

Once regarded as a minor opportunistic pathogen, *S. oralis* is now considered a significant pathogen that affects immunocompromised individuals and those with hematological malignancy (cancers that affect the blood). In these individuals *S. oralis* is known to create such complications as bacterial endocarditis, adult respiratory distress syndrome and streptococcal shock [1].

*S. oralis* is related to *S. pneumoniae* a common cause of otitis media, septicemia, pneumonia, and meningitis in children that results in a significant mortality rate throughout the world [2]. *S. oralis* is known to be one of the first bacteria to begin to form the plaque biofilm. Research shows that the *S. oralis* is able to interact with *Porphyromonas gingivalis*, which is considered to be one of the leading causes of periodontal disease. Periodontal disease is considered the most common disease affecting the human oral cavity [3].

Interesting facts *S. oralis* has only been reported to cause meningitis in cases where dental work was recently performed [4]. *S. oralis* is also seeing use as a probiotic to help support a healthy oral cavity. The strain used as the probiotic is modified, and it helps to aid in restoring the mouth with good bacteria and helping to keep out bacteria that degenerate oral health. To do this, *S. oralis* colonizes sites around teeth such as the gums, and competes with other bacteria [5].

#### Product type

Primary Polyclonal antibody

#### Immunogen

*S. oralis* ATCC 9811 10<sup>10</sup> cells inactivated in glutaraldehyde 2.5%v/v

#### Source

Rabbit

#### Reacts with

*Streptococcus oralis*

#### Specificity

*Streptococcus oralis*; not cross-react against *S.mutans* ATCC 25175; *P.gingivalis* ATCC 33277; *F.nucleatum* ATCC 25586 [6].

#### Tested applications

ELISA; 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 100mM sodium citrate, 50mM Tris and 0.05% v/v glycerol. 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.

## Reference

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- [2] Whalan, Rachel H., Simon G. P. Funnell, et al. "Distribution and Genetic Diversity of the ABC Transporter Lipoproteins PiuA and PiaA within *Streptococcus pneumoniae* and Related *Streptococci*." *Journal of Microbiology*. 188.3 (2006): 1031-1038. Web. 16 Dec. 2013.
- [3] Maeda, K., H. Nagata, M. Kuboniwa, et al. "Identification and Characterization of *Porphyromonas gingivalis* Client Proteins That Bind to *Streptococcus oralis* Glyceraldehyde-3-Phosphate Dehydrogenase." *Infection and Immunity*. 81.3 (2013): 753-763. Web. 16 Dec. 2013.
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- [5] "How EvroaPro Oral Probiotics Aid Oral Health." *Evroa Oral Probiotics*. N.p., n. d. Web. 16 Dec. 2013.
- [6] Manti A, Ciandrini E, Campana R, Dominici S, Ciacci C, Federici S, Sisti D, Rocchi MB, Papa S, Baffone W. **A dual-species microbial model for studying the dynamics between oral streptococci and periodontal pathogens during biofilm development on titanium surfaces by flow cytometry.** *Res Microbiol.* 2016 Jun;167(5):393-402. doi: 10.1016/j.resmic.2016.03.004. Epub 2016 Mar 28