ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Streptococcus A Antibodies

□ **Cat.** STA13-M	Mouse Monoclonal Anti-Streptococcus A IgG, aff pure, Clone 1	**SIZE**: 100 ug
□ **Cat.** STA14-M	Mouse Monoclonal Anti-Streptococcus A IgG, aff pure, Clone 2	**SIZE**: 100 ug

Streptococcus is a genus of coccus (spherical) gram-positive bacteria belonging to the phylum Firmicutes] and the Lactobacillales (lactic acid bacteria) order. Cellular division occurs along a single axis in these bacteria. In contrast with Staphylococci, which divide along multiple axes and generate grape-like clusters of cells. Most Streptococci are oxidase- and catalase-negative, and many are facultative anaerobes. In addition to streptococcal pharyngitis (strep throat), certain Streptococcus species are responsible for many cases of pink eye, meningitis, bacterial pneumonia, endocarditis, erysipelas, and necrotizing fasciitis (the 'flesh-eating' bacterial infections). However, many streptococcal species are not pathogenic, and form part of the commensal human microbiota of the mouth, skin, intestine, and upper respiratory tract.

Species of Streptococcus are classified based on their **hemolytic** properties. **Alpha-hemolytic** species cause oxidization of iron in hemoglobin molecules within red blood cells, giving it a greenish color on blood agar. **Beta-hemolytic** species cause complete rupture of red blood cells. On blood agar, this appears as wide areas clear of blood cells surrounding bacterial colonies. Gamma-hemolytic species cause no hemolysis. Beta-hemolytic streptococci are further classified by **Lancefield grouping**, a serotype classification (that is, describing specific carbohydrates present on the bacterial cell wall). The 20 described serotypes are named Lancefield groups A to V (excluding I and J). In the medical setting, the most important groups are the alpha-hemolytic streptococci S. pneumoniae and Streptococcus viridans group, and the beta-hemolytic streptococci of Lancefield groups A and B (also known as "group A strep" and "group B strep").

Species	Host	Disease
S. pyogenes	human	pharyngitis
S. agalactiae	human, cattle	neonatal meningitis and sepsis
S. equisimilis	human, animals	endocarditis, bacteremia, pneumonia, meningitis, respiratory infections
S. bovis	human, animals	biliary or urinary tract infections, endocarditis
S. anginosus	human, animals	subcutaneous/organ abscesses, meningitis, respiratory infections
S. sanguinis	human	endocarditis, dental caries
S. suis	swine	meningitis
S. mitis	human	endocarditis
S. mutans	human	dental caries
S. pneumoniae	human	pneumonia

Streptococci have been divided into six groups on the basis of their 16S rDNA sequences. The genomes of hundreds of species have been sequenced.[20] Most Streptococcus genomes are 1.8 to 2.3 Mb in size and encode 1,700 to 2,300 proteins. The four species shown in the table (S. pyogenes, S. agalactiae, S. pneumoniae, and S. mutans) have an average pairwise protein sequence identity of about 70%.

Source of Antigen and Antibodies

Antigen	Streptococcus A antigens
Ab Host/type	Mouse, monoclonal aff pure IgG1 (cat # STA13-M and #STA14-M) purified over the antigen column
2-Ab	**Goat Anti-mouse IgG-HRP conjugate** Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Mouse IgG1 isotype negative control

20102-101	Mouse IgG1 isotype control, purified
20102-101-1	Mouse IgG1 isotype control, purified
20102-101-A488	Mouse IgG1-Alexa 488 conjugate (isotype control)
20102-101-A555	Mouse IgG1-Alexa 555 conjugate (isotype control)
20102-101-A647	Mouse IgG1-Alexa 647 conjugate (isotype control)
20102-101-APC	Mouse IgG1-APC conjugate (isotype control)
20102-101-B	Mouse IgG1-Biotin conjugate (isotype control)
20102-101-F	Mouse IgG1-FITC conjugate (isotype control)
20102-101-FP	Mouse IgG1-FITC-PE conjugate (isotype control)
20102-101-HP	Mouse IgG1-HRP conjugate (isotype control)
20102-101-PC5	Mouse IgG1-PE-Cy5 conjugate (isotype control)
20102-101-PE	Mouse IgG1-PE conjugate (isotype control)

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

□ 1 mg/ml or specified on the vial

□ solution □ lyophilized powder

Supplied in **Buffer**: PBS+0.1% azide

Reconstitute powder in PBS at a desired concn

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20°C or below.
Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (0.12 ug/ml)
ELISA (0.1-1 ug/ml using 50-100 ng control peptide/well).
#STA13-M and #STA14-M can be used as a pair.
Histochemistry & Immunofluorescence: no tested. we recommend the use of affinity purified antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

Antibodies are specific for Streptococcus A.

General References: Faclam R (2002) Clin Microbiol. Rev. 15, 613-630; Rukoof KL (1990) Eur. J. Clin. Micorbiol. 9, 75-79

*This product is for in vitro research use only.

Related material available from ADI

STA13-M-Mouse-Mono-Anti-Streptococcus-A-IgG 15111A

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