SANTA CRUZ BIOTECHNOLOGY, INC.

EAG (G-3): sc-377242

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Streptococcus equi subspecies *equi (S. equi)* is a host-restricted pathogen that is the cause of a prevalent and infectious equine disease known as strangles. Highly contagious, strangles causes a profound inflammatory response, with symptoms including lymphodendopathy of the head and neck, fever, nasal discharge and lack of appetite in the affected horse. Strangles is most commonly a problem in young horses as their immune systems are not fully developed. EAG (Ig, α2-macroglobulin and albumin binding protein EAG *(Streptococcus equi* subspecies *equi 4047)*) is a 429 amino acid protein.

REFERENCES

1. Chanter, N., Talbot, N.C., Newton, J.R., Hewson, D. and Verheyen, K. 2000. *Streptococcus equi* with truncated M-proteins isolated from outwardly healthy horses. Microbiology 146: 1361-1369.
2. Harrington, D.J., Sutcliffe, I.C. and Chanter, N. 2002. The molecular basis of *Streptococcus equi* infection and disease. Microbes Infect. 4: 501-510.
3. Timoney, J.F. 2004. The pathogenic equine streptococci. Vet. Res. 35: 397-409.
4. Davidson, A., Traub-Dargatz, J.L., Magnuson, R., Hill, A., Irwin, V., Newton, R., Waller, A., Smith, K., Callan, R.J., Meehan, M., Owen, P. and Salman, M. 2008. Lack of correlation between antibody titers to Fibrinogen-binding protein of *Streptococcus equi* and persistent carriers of strangles. J. Vet. Diagn. Invest. 20: 457-462.
5. Holden, M.T., Heather, Z., Paillot, R., Steward, K.F., Webb, K., Ainslie, F., Jourdan, T., Bason, N.C., Holroyd, N.E., Mungall, K., Quail, M.A., Sanders, M., Simmonds, M., Willey, D., Brooks, K., Aanensen, D.M., Spratt, B.G., Jolley, K.A., Maiden, M.C., Kehoe, M., Chanter, N., et al. 2009. Genomic evidence for the evolution of *Streptococcus equi:* host restriction, increased virulence, and genetic exchange with human pathogens. PLoS Pathog. 5: e1000346.
6. Boyle, A. 2011. *Streptococcus equi* subspecies *equi* infection (strangles) in horses. Compend. Contin. Educ. Vet. 33: E1-E7.
7. Waller, A.S., Paillot, R. and Timoney, J.F. 2011. *Streptococcus equi:* a pathogen restricted to one host. J. Med. Microbiol. 60: 1231-1240.

SOURCE

EAG (G-3) is a mouse monoclonal antibody raised against amino acids 1-429 representing full length EAG of *Streptococcus equi* subsp. *equi* origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

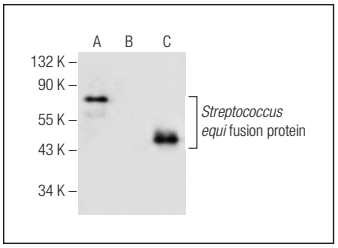
EAG (G-3) is recommended for detection of Ig, α2-macroglobulin and albumin binding protein EAG of strains *4047, zooepidemicus and MGCS10565* of *S. equi* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of EAG: 54 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



EAG (G-3): sc-377242. Western blot analysis of *Streptococcus equi* recombinant EAG (FL-429) (**A**), EAG (amino acids 215-429) (**B**) and EAG (amino acids 1-214) (**C**) fusion proteins.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

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