



Extracellular solute-binding protein (B-6): sc-398038

BACKGROUND

Streptococcus is a large genus of Gram-positive bacteria that is comprised of over 50 different species, which are classified into α , β or γ hemolytic groups, based on their hemolytic properties. Carbohydrates present on the cell wall further classify β -hemolytic streptococci into Lancefield groups. *Streptococcus equi* subspecies *equi* (*S. equi*) is an equine host-adapted pathogen that causes strangles and belongs to Lancefield group C. Strangles is a highly prevalent, highly contagious disease characterized by tonsillitis and lymphadenitis of the head and neck. Some symptoms of strangles may include fever, depression, and submandibular and retropharyngeal lymph node enlargement that can lead to respiratory distress. The infection is transmitted by inhalation of *S. equi* or direct contact with mucopurulent discharge from an infected animal.

REFERENCES

- Guss, B., Flock, M., Frykberg, L., Waller, A.S., Robinson, C., Smith, K.C. and Flock, J.I. 2009. Getting to grips with strangles: an effective multi-component recombinant vaccine for the protection of horses from *Streptococcus equi* infection. PLoS Pathog. 5: e1000584.
- Ivens, P.A., Matthews, D., Webb, K., Newton, J.R., Steward, K., Waller, A.S., Robinson, C. and Slater, J.D. 2011. Molecular characterisation of "strangles" outbreaks in the UK: the use of M-protein typing of *Streptococcus equi* ssp. *equi*. Equine Vet. J. 43: 359-364.
- Merant, C., Sheoran, A. and Timoney, J.F. 2011. Association of *Streptococcus equi* with equine monocytes. Vet. Immunol. Immunopathol. 143: 83-86.
- Waller, A.S., Paillot, R. and Timoney, J.F. 2011. *Streptococcus equi*: a pathogen restricted to one host. J. Med. Microbiol. 60: 1231-1240.
- Boyle, A. 2011. *Streptococcus equi* subspecies *equi* infection (strangles) in horses. Compend. Contin. Educ. Vet. 33: E1-E7.
- Flock, M., Frykberg, L., Sköld, M., Guss, B. and Flock, J.I. 2012. Antiphagocytic function of an IgG glycosyl hydrolase from *Streptococcus equi* subsp. *equi* and its use as a vaccine component. Infect. Immun. 80: 2914-2919.
- Rodrigues, M.A., Figueiredo, L., Padrela, L., Cadete, A., Tiago, J., Matos, H.A., Gomes de Azevedo, E., Florindo, H.F., Goncalves, L.M. and Almeida, A.J. 2012. Development of a novel mucosal vaccine against strangles by supercritical enhanced atomization spray-drying of *Streptococcus equi* extracts and evaluation in a mouse model. Eur. J. Pharm. Biopharm. 82: 392-400.
- Webb, K., Barker, C., Harrison, T., Heather, Z., Steward, K.F., Robinson, C., Newton, J.R. and Waller, A.S. 2013. Detection of *Streptococcus equi* subspecies *equi* using a triplex qPCR assay. Vet. J. 195: 300-304.

SOURCE

Extracellular solute-binding protein (B-6) is a mouse monoclonal antibody raised against amino acids 1-481 representing full length Extracellular solute-binding protein of *Streptococcus equi* subsp. *equi* 4047 origin.

PRODUCT

Each vial contains 200 μ g IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

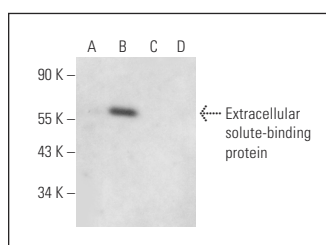
Extracellular solute-binding protein (B-6) is recommended for detection of Extracellular solute-binding protein of *Streptococcus equi* subsp. *equi* 4047 origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 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).

Positive Controls: *Streptococcus equi* (avirulent) whole cell lysate.

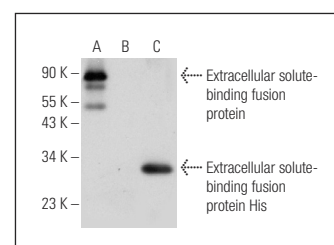
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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-IgG λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Extracellular solute-binding protein (B-6): sc-398038. Western blot analysis of Extracellular solute-binding protein expression in *Streptococcus equi* (virulent) (A), *Streptococcus equi* (avirulent) (B), *Rhodococcus equi* (C) and *Escherichia coli* (D) whole cell lysates. Note lack of reactivity with *S. equi* virulent strain in lane A, and with unrelated bacterial lysates in lanes C and D.



Extracellular solute-binding protein (B-6): sc-398038. Western blot analysis of Extracellular solute-binding protein expression in *Streptococcus equi* subsp. *equi* (1-481) (A), *Streptococcus equi* subsp. *equi* (1-250) (B) and *Streptococcus equi* subsp. *equi* (251-481) (C) fusion proteins. Note lack of reactivity in lane B.

STORAGE

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

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.