

# UDPase (D-4): sc-398133

## BACKGROUND

*Streptococcus* is a large genus of Gram-positive bacteria that is comprised of over 50 different species, which are classified into  $\alpha$ ,  $\beta$  or  $\gamma$  hemolytic groups, based on their hemolytic properties. Carbohydrates present on the cell wall further classify  $\beta$ -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., et al. 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.S., et al. 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., et al. 2011. Association of *Streptococcus equi* with equine monocytes. Vet. Immunol. Immunopathol. 143: 83-86.
- Waller, A.S., et al. 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., et al. 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.

## SOURCE

UDPase (D-4) is a mouse monoclonal antibody raised against amino acids 1-300 representing full length UDPase of *Streptococcus equi* subsp. *zooepidemicus* origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

UDPase (D-4) is available conjugated to agarose (sc-398133 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398133 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398133 PE), fluorescein (sc-398133 FITC), Alexa Fluor® 488 (sc-398133 AF488), Alexa Fluor® 546 (sc-398133 AF546), Alexa Fluor® 594 (sc-398133 AF594) or Alexa Fluor® 647 (sc-398133 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398133 AF680) or Alexa Fluor® 790 (sc-398133 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

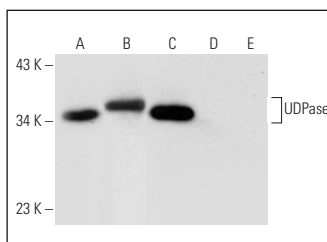
UDPase (D-4) is recommended for detection of UDPase of *Streptococcus equi* subsp. *zooepidemicus*/*Streptococcus equi* subsp. *equi* 4047 origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of 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* (virulent) whole cell lysate or *Streptococcus equi* (avirulent) whole cell lysate or *Streptococcus equi* subsp. *zooepidemicus* whole cell lysate.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



UDPase (D-4): sc-398133. Western blot analysis of UDPase expression in *Streptococcus equi* subsp. *zooepidemicus* (A), *Streptococcus equi* (virulent) (B), *Streptococcus equi* (avirulent) (C), *Rhodococcus equi* (D) and *Escherichia coli* (E) whole cell lysates. Note lack of reactivity with unrelated bacterial lysates in lanes D and E.

## 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](http://www.scbt.com) for detailed protocols and support products.