SANTA CRUZ BIOTECHNOLOGY, INC.

VapH (F-1): sc-390416

BACKGROUND

Rhodococcus equi is a Gram-positive bacterium that causes pyogranulomatous pneumonia in foals and immunocompromised humans. *R. equi* infection is the leading cause of foal death within the first six months of life. There are seven virulence-associated proteins: VapA, VapC, VapD, VapE, VapF, VapG and VapH. Infected foals typically develop an immune response to *R. equi* infections, with the majority of infected foals expressing antibodies against VapA, with decreasing levels of expression for VapD, F, G and H, respectively.

REFERENCES

1. Takai, S., et al. 2000. DNA sequence and comparison of virulence plasmids from *Rhodococcus equi* ATCC 33701 and 103. Infect. Immun. 68: 6840-6847.
2. Hooper-McGrevy, K.E., et al. 2003. Immunoglobulin G subisotype responses of pneumonic and healthy, exposed foals and adult horses to *Rhodococcus equi* virulence-associated proteins. Clin. Diagn. Lab. Immunol. 10: 345-351.
3. Kohler, A.K., et al. 2003. *Rhodococcus equi* secreted antigens are immunogenic and stimulate a type 1 recall response in the lungs of horses immune to *R. equi* infection. Infect. Immun. 71: 6329-6337.
4. Jain, S., et al. 2003. Deletion of vapA encoding virulence associated protein A attenuates the intracellular actinomycete *Rhodococcus equi*. Mol. Microbiol. 50: 115-128.
5. Russell, D.A., et al. 2004. The LysR-type transcriptional regulator VirR is required for expression of the virulence gene VapA of *Rhodococcus equi* ATCC 33701. J. Bacteriol. 186: 5576-5584.
6. Polidori, M. and Haas, A. 2006. VapI, a new member of the *Rhodococcus equi* Vap family. Antonie Van Leeuwenhoek 90: 299-304.
7. Monego, F., et al. 2009. Molecular characterization of *Rhodococcus equi* from horse-breeding farms by means of multiplex PCR for the Vap gene family. Curr. Microbiol. 58: 399-403.
8. Whitehead, A.E., et al. 2012. Development of a live, attenuated, potential vaccine strain of *R. equi* expressing VapA and the virR operon, and virulence assessment in the mouse. Vet. Immunol. Immunopathol. 145: 479-484.
9. Witkowski, L., et al. 2012. Development of ELISA test for determination of the level of antibodies against *Rhodococcus equi* in equine serum and colostrum. Vet. Immunol. Immunopathol. 149: 280-285.

SOURCE

VapH (F-1) is a mouse monoclonal antibody raised against amino acids 1-187 representing full length virulence associated protein VapH of *Rhodococcus equi* origin.

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.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VapH (F-1) is available conjugated to agarose (sc-390416 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390416 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390416 PE), fluorescein (sc-390416 FITC), Alexa Fluor® 488 (sc-390416 AF488), Alexa Fluor® 546 (sc-390416 AF546), Alexa Fluor® 594 (sc-390416 AF594) or Alexa Fluor® 647 (sc-390416 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390416 AF680) or Alexa Fluor® 790 (sc-390416 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

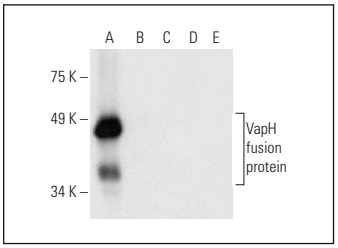
VapH (F-1) is recommended for detection of virulence associated protein VapH of *R. equi* subsp. *equi* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Positive Controls: *Rhodococcus equi* whole cell lysate.

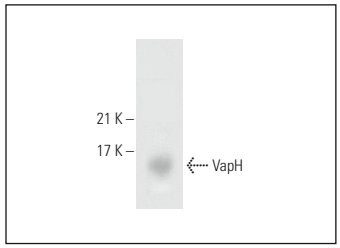
RECOMMENDED SUPPORT REAGENTS

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



VapH (F-1): sc-390416. Western blot analysis of *Rhodococcus equi* recombinant VapH (1-187) (**A**), vapA (29-189) (**B**), vapC (29-174) (**C**), VapG (1-172) (**D**) and VapI (1-80) (**E**) fusion proteins.



VapH (F-1): sc-390416. Western blot analysis of VapH expression in *Rhodococcus equi* whole cell lysate.

PROTOCOLS

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