

VapE (G-9): sc-390036

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. VapE (virulence associated protein VapE) is a 206 amino acid protein encoded by *R. equi* virulence plasmid, pREAT701 (p33701). 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 Vap D, 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.

SOURCE

VapE (G-9) is a mouse monoclonal antibody raised against amino acids 1-206 representing full length virulence associated protein VapE of *Rhodococcus equi* origin.

PRODUCT

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

VapE (G-9) is available conjugated to agarose (sc-390036 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390036 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390036 PE), fluorescein (sc-390036 FITC), Alexa Fluor® 488 (sc-390036 AF488), Alexa Fluor® 546 (sc-390036 AF546), Alexa Fluor® 594 (sc-390036 AF594) or Alexa Fluor® 647 (sc-390036 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390036 AF680) or Alexa Fluor® 790 (sc-390036 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

VapE (G-9) is recommended for detection of VapE of *Rhodococcus 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).

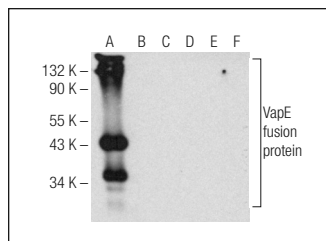
Molecular Weight of VapE: 21 kDa.

Positive Controls: *Rhodococcus equi* whole cell lysate.

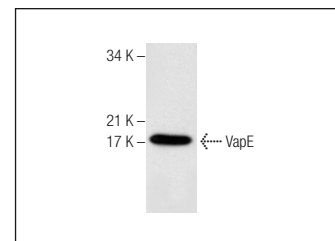
RECOMMENDED SUPPORT REAGENTS

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



VapE (G-9): sc-390036. Western blot analysis of *Rhodococcus equi* recombinant VapE (1-206) (A), VapG (1-172) (B), VapH (1-187) (C), VapI (1-80) (D), VapD (1-164) (E) and VapF (1-150) (F) fusion proteins.



VapE (G-9): sc-390036. Western blot analysis of VapE expression in *Rhodococcus equi* whole cell lysate.

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.