

C. abortus LPS (13/4): sc-101593

BACKGROUND

Chlamydomonas abortus, also known as *Chlamydia psittaci*, is a gram-negative intracellular bacterium that colonizes in the placenta of animals causing abortion in the last term of gestation. An enzootic and zoonotic pathogen, *C. abortus* contains 961 genes arranged in a circularized structure, in which 842 genes are conserved with *Chlamydomonas caviae* and *Chlamydomonas pneumoniae*. *C. abortus* is a derivative of the group *Chlamydiales*, which is divided into four families, *Chlamydiaceae*, *Simkaniaceae*, *Parachlamydiaceae* and *Waddliaceae*. Host tropism and disease causation of *C. abortus* is due its composition of transmembrane helical proteins (TMH) and polymorphic membrane proteins (Pmp). *C. abortus* consists of a heat-resistant lipopolysaccharide (LPS), which is common to all *Chlamydiaceae* species.

REFERENCES

- Entrican, G., et al. 2001. Chlamydial infection in sheep: immune control versus fetal pathology. *J. R. Soc. Med.* 94: 273-277.
- Vretou, E., et al. 2001. Polymorphic outer-membrane proteins of *Chlamydomonas abortus* are glycosylated. *Microbiology* 147: 3303-3310.
- Hoelzle, L.E., et al. 2003. Expression of the major outer membrane protein (MOMP) of *Chlamydomonas abortus*, *Chlamydomonas pecorum*, and *Chlamydomonas suis* in *Escherichia coli* using an arabinose-inducible plasmid vector. *J. Vet. Med. B, Infect. Dis. Vet. Public Health* 50: 383-389.
- Thomson, N.R., et al. 2005. The *Chlamydomonas abortus* genome sequence reveals an array of variable proteins that contribute to interspecies variation. *Genome Res.* 15: 629-640.
- Szeredi, L., et al. 2006. Epidemiological and pathological study on the causes of abortion in sheep and goats in Hungary (1998-2005). *Acta Vet. Hung.* 54: 503-515.
- Biesenkamp-Uhe, C., et al. 2007. Therapeutic *Chlamydomonas abortus* and *C. pecorum* vaccination transiently reduces bovine mastitis associated with *Chlamydomonas* infection. *Infect. Immun.* 75: 870-877.

SOURCE

C. abortus LPS (13/4) is a mouse monoclonal antibody raised against the S26/3 ovine isolate of *C. abortus* 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.

C. abortus LPS (13/4) is available conjugated to agarose (sc-101593 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101593 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101593 PE), fluorescein (sc-101593 FITC), Alexa Fluor® 488 (sc-101593 AF488), Alexa Fluor® 546 (sc-101593 AF546), Alexa Fluor® 594 (sc-101593 AF594) or Alexa Fluor® 647 (sc-101593 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-101593 AF680) or Alexa Fluor® 790 (sc-101593 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

C. abortus LPS (13/4) is recommended for detection of LPS from all species of *C. abortus* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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) 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.

SELECT PRODUCT CITATIONS

- Colville, K.M., et al. 2012. Chlamydiosis in British songbirds. *Vet. Rec.* 171: 177.
- Beckmann, K.M., et al. 2014. Chlamydiosis in British garden birds (2005-2011): retrospective diagnosis and *Chlamydia psittaci* genotype determination. *Ecohealth* 11: 544-563.
- Bautista, C.J., et al. 2016. Changes in milk composition in obese rats consuming a high-fat diet. *Br. J. Nutr.* 115: 538-546.
- Livingstone, M., et al. 2017. Pathogenic outcome following experimental infection of sheep with *Chlamydia abortus* variant strains LLG and POS. *PLoS ONE* 12: e0177653.
- Caspe, S.G., et al. 2020. The 1B vaccine strain of *Chlamydia abortus* produces placental pathology indistinguishable from a wild type infection. *PLoS ONE* 15: e0242526.
- Livingstone, M., et al. 2021. Efficacy of two *Chlamydia abortus* subcellular vaccines in a pregnant ewe challenge model for ovine enzootic abortion. *Vaccines* 9: 898.

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.