



Brucella abortus (Bx85): sc-51789

BACKGROUND

Brucella are very small, Gram-negative coccobacilli. *Brucella abortus* is a species of *Brucella* and is the causative agent of bovine brucellosis, an infection that leads to spontaneous abortion, premature calving and infertility in cattle. *Brucella abortus* infects the placenta and fetus of gestating cows and can be transmitted to humans by drinking infected unpasteurised milk or from contact with discharges from cattle or goats that abort their fetus. When humans are infected by this organism, they develop a severe fever. *Brucella abortus* uses cyclic β -1,2-glucan as a virulence factor and to control hypotonic adaptation. To overcome this problem of iron deprivation that *Brucella abortus* encounters in both nature and its host, the microbe secretes the siderophores 2,3-dihydroxybenzoic acid and brucebactin, which are regulated by the protein Irr.

REFERENCES

1. Andrews, E., Salgado, P., Folch, H. and Oñate, A. 2006. Vaccination with live *Escherichia coli* expressing *Brucella abortus* Cu/Zn superoxide-dismutase: II. Induction of specific CD8⁺ cytotoxic lymphocytes and sensitized CD4⁺ IFN- γ -producing cells. *Microbiol. Immunol.* 50: 389-393.
2. Connolly, J.P., Comerchi, D., Alefantis, T.G., Walz, A., Quan, M., Chafin, R., Grewal, P., Mujer, C.V., Ugalde, R.A. and DelVecchio, V.G. 2006. Proteomic analysis of *Brucella abortus* cell envelope and identification of immunogenic candidate proteins for vaccine development. *Proteomics* 6: 3767-3780.
3. Pei, J., Turse, J.E., Wu, Q. and Ficht, T.A. 2006. *Brucella abortus* rough mutants induce macrophage oncosis that requires bacterial protein synthesis and direct interaction with the macrophage. *Infect. Immun.* 74: 2667-2675.
4. Yang, X., Becker, T., Walters, N. and Pascual, D.W. 2006. Deletion of *znuA* virulence factor attenuates *Brucella abortus* and confers protection against wildtype challenge. *Infect. Immun.* 74: 3874-3879.
5. Kahl-McDonagh, M.M. and Ficht, T.A. 2006. Evaluation of protection afforded by *Brucella abortus* and *Brucella melitensis* unmarked deletion mutants exhibiting different rates of clearance in BALB/c mice. *Infect. Immun.* 74: 4048-4057.
6. Martínez, M., Ugalde, R.A. and Almirón, M. 2006. Irr regulates brucebactin and 2,3-dihydroxybenzoic acid biosynthesis, and is implicated in the oxidative stress resistance and intracellular survival of *Brucella abortus*. *Microbiology* 152: 2591-2598.
7. Ocholi, R.A., Kwaga, J.K., Ajogi, I. and Bale, J.O. 2006. Abortion due to *Brucella abortus* in sheep in Nigeria. *Rev. - Off. Int. Epizoot.* 24: 973-979.
8. Roset, M.S., Ciocchini, A.E., Ugalde, R.A. and Liñón de Iannino, N. 2006. The *Brucella abortus* cyclic β -1,2-glucan virulence factor is substituted with O-ester-linked succinyl residues. *J. Bacteriol.* 188: 5003-5013.
9. Roux, C.M., Booth, N.J., Bellaire, B.H., Gee, J.M., Roop, R.M., Kovach, M.E., Tsolis, R.M., Elzer, P.H. and Ennis, D.G. 2006. RecA and RadA proteins of *Brucella abortus* do not perform overlapping protective DNA repair functions following oxidative burst. *J. Bacteriol.* 188: 5187-5195.

SOURCE

Brucella abortus (Bx85) is a mouse monoclonal antibody raised against purified LPS of *Brucella abortus*.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Brucella abortus (Bx85) is recommended for detection of *Brucella abortus* LPS by Western Blotting (starting dilution 1:15, dilution range 1:15-1:100) and solid phase ELISA (optimal dilution to be determined by titration).

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.