



# Mycobacterium tuberculosis RV3134 Dormancy Regulon (B10): sc-52106

## BACKGROUND

*Mycobacterium tuberculosis* is the most common cause of tuberculosis and is one of the world's most harmful human pathogens. It is a Gram-positive obligate anaerobe that divides slowly (every 15 to 20 hours). *M. tuberculosis* is only able to grow within a host organism and is able to persist within humans for long periods in a dormant state without causing any overt disease symptoms. Rv2623, an ATP-binding protein, is an *M. tuberculosis* dormancy regulon that may be involved in the response to environmental signals by *M. tuberculosis*. Expression of Rv2623 increases *in vitro* at reduced oxygen tensions, but is independent of phase of growth. Rv2623 shares homology with a family of prokaryotic universal stress proteins. RV3134, a related protein, is also an *M. tuberculosis* regulon.

## REFERENCES

1. Sherman, D.R., Schoolnik, G.K., Voskuil, M., Schnappinger, D., Harrell, M.I. and Liao, R. 2001. Regulation of the *Mycobacterium tuberculosis* hypoxic response gene encoding  $\alpha$ -crystallin. *Proc. Natl. Acad. Sci. USA* 98: 7534-7539.
2. Florczyk, M.A., McCue, L.A., Stack, R.F., Hauer, C.R. and McDonough, K.A. 2001. Identification and characterization of mycobacterial proteins differentially expressed under standing and shaking culture conditions, including Rv2623 from a novel class of putative ATP-binding proteins. *Infect. Immun.* 69: 5777-5785.
3. Boon, C. and Dick, T. 2002. *Mycobacterium bovis* BCG response regulator essential for hypoxic dormancy. *J. Bacteriol.* 184: 6760-6767.
4. Parish, T., Smith, D.A., Kendall, S., Casali, N., Bancroft, G.J. and Stoker, N.G. 2003. Deletion of two-component tuberculosis. *Infect. Immun.* 71: 1134-1140.
5. Shi, L., Jung, Y.J., Tyagi, S., Gennaro, M.L. and North, R.J. 2003. Expression of Th1-mediated immunity in mouse tuberculosis transcription pattern characteristic of nonreplicating persistence. *Proc. Natl. Acad. Sci. USA* 100: 241-246.
6. Voskuil, M.I., Schnappinger, D., Visconti, K.C., Harrell, M.I., Dolganov, G.M., Sherman, D.R. and Schoolnik, G.K. 2003. Inhibition of respiration by nitric oxide induces a *Mycobacterium tuberculosis* dormancy program. *J. Exp. Med.* 198: 705-713.

## SOURCE

*Mycobacterium tuberculosis* RV3134 Dormancy Regulon (B10) is a mouse monoclonal antibody raised against *Mycobacterium tuberculosis* RV3134 recombinant protein of dormancy regulon.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>3</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

*Mycobacterium tuberculosis* RV3134 Dormancy Regulon (B10) is recommended for detection of *M. tuberculosis* RV3134 dormancy regulon of *Mycobacterium tuberculosis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

## 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.