

# Mycobacterium tuberculosis RV3134 Dormancy Regulon (D5): sc-52107

## 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 (D5) is a mouse monoclonal antibody raised against *Mycobacterium tuberculosis* RV3134 recombinant protein of dormancy regulon origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</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 (D5) 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).

## SELECT PRODUCT CITATIONS

1. Wang, J., Ge, P., Lei, Z., Lu, Z., Qiang, L., Chai, Q., Zhang, Y., Zhao, D., Li, B., Su, J., Peng, R., Pang, Y., Shi, Y., Zhang, Y., Gao, G.F., Qiu, X.B. and Liu, C.H. 2021. *Mycobacterium tuberculosis* protein kinase G acts as an unusual ubiquitinating enzyme to impair host immunity. EMBO Rep. 22: e52175.

## 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.