SANTA CRUZ BIOTECHNOLOGY, INC.

# Mycobacterium tuberculosis RV2623 Dormancy Regulon (A10): sc-52105



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**

**BACKGROUND** 

- 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.
- 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.
- 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.
- 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.
- 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 RV2623 Dormancy Regulon (A10) is a mouse monoclonal antibody raised against *Mycobacterium tuberculosis* RV2623 recombinant protein of dormancy regulon.

#### **PRODUCT**

Each vial contains 100  $\mu g \; lg G_1$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

#### **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **APPLICATIONS**

Mycobacterium tuberculosis RV2623 Dormancy Regulon (A10) is recommended for detection of *M. tuberculosis* RV2623 dormancy regulon 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 for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com