

# MT 38 kDa antigen (HTM83): sc-52104

## BACKGROUND

*Mycobacterium tuberculosis* is a slow-growing obligate aerobic bacillus that causes most cases of tuberculosis (TB). It is a small, rod-like microbe that can withstand weak disinfectants and survive in a dry state for weeks but can only grow within a host organism. *M. tuberculosis* has a thick waxy cell wall that is responsible for the typical caseous granuloma formation in tuberculosis. TB infection begins when the mycobacteria reach the pulmonary alveoli, where they invade and replicate within alveolar macrophages. Bacteria are picked up by dendritic cells, which transport them to local lymph nodes. The bacteria may be further spread through the bloodstream to the more distant tissues and organs where secondary TB lesions can develop in lung apices, peripheral lymph nodes, kidneys, brain and bone. The 38 kDa antigen of *M. tuberculosis* (MT 38 kDa antigen) induces cellular and humoral immune responses by acting through TLR2 and TLR4 to activate the ERK1/2 and p38 MAPK pathways, which promote the expression of TNF $\alpha$  and IL-6 during mycobacterial infection.

## REFERENCES

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5. Shams, H., et al. 2003. Human CD8<sup>+</sup> T cells recognize epitopes of the 28 kDa hemolysin and the 38 kDa antigen of *Mycobacterium tuberculosis*. *J. Leukoc. Biol.* 74: 1008-1014.
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## SOURCE

MT 38 kDa antigen (HTM83) is a mouse monoclonal antibody raised against the recombinant 38 kDa antigen of *Mycobacterium tuberculosis* 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.

## APPLICATIONS

MT 38 kDa antigen (HTM83) is recommended for detection of the 38 kDa antigen of *M. tuberculosis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of MT 38 kDa antigen: 38 kDa.

## 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](http://www.scbt.com) for detailed protocols and support products.