

# C. trachomatis MOMP (HT10): sc-51837

## BACKGROUND

Chlamydia is caused by the bacterium *Chlamydia trachomatis*. The intracytoplasmic inclusions caused by the bacterium are draped around the infected nucleus of the cell. *C. trachomatis* is an intracellular organism that has a genome size of approximately 500-1000 kb and contains both RNA and DNA. It exists as 15 different serotypes which cause four major diseases in humans: endemic trachoma (caused by serotypes A and C), sexually transmitted disease and inclusion conjunctivitis (caused by serotypes D and K) and lymphogranuloma venereum (caused by serotypes L1, L2 and L3). Chlamydia usually infects the cervix and fallopian tubes of women and the urethra of men. It is one of the leading causes of blindness in underdeveloped countries. Most strains of *C. trachomatis* are recognized by monoclonal antibodies to epitopes in the VS4 region of MOMP.

## REFERENCES

1. Weiss, E., Schramek, S., Wilson, N.N. and Newman, L.W. 1970. Deoxyribonucleic acid heterogeneity between human and murine strains of *Chlamydia trachomatis*. Infect. Immun. 2: 24-28.
2. Dhir, S.P., Kenny, G.E. and Grayston, J.T. 1971. Characterization of the group antigen of *Chlamydia trachomatis*. Infect. Immun. 4: 725-30.
3. Gutter, B., Asher, Y., Cohen, Y. and Becker, Y. 1973. Studies on the developmental cycle of *Chlamydia trachomatis*: isolation and characterization of the initial bodies. J. Bacteriol. 115: 691-702.
4. Kim, S.K., Devine, L., Angevine, M., DeMars, R. and Kavathas, P.B. 2000. Direct detection and magnetic isolation of *Chlamydia trachomatis* major outer membrane protein-specific CD8<sup>+</sup> CTLs with HLA class I tetramers. J. Immunol. 165: 7285-7292.
5. Bas, S., Genevay, S., Schenkel, M.C. and Vischer, T.L. 2002. Importance of species-specific antigens in the serodiagnosis of *Chlamydia trachomatis* reactive arthritis. Rheumatology 41: 1017-1020.
6. Clad, A., Petersen, E.E. and Dettlaff, S. 2004. Antibodies to *Chlamydia trachomatis* heat shock protein 60 (cHSP 60) and *Chlamydia trachomatis* major outer membrane protein (MOMP) in women with different tubal status. Clin. Lab. 49: 269-271.
7. Yen, T.Y., Pal, S. and de la Maza, L.M. 2005. Characterization of the disulfide bonds and free cysteine residues of the *Chlamydia trachomatis* mouse pneumonitis major outer membrane protein. Biochemistry 44: 6250-6256.
8. Deka, S., Vanover, J., Dessus-Babus, S., Whittimore, J., Howett, M.K., Wyrick, P.B. and Schoborg, R.V. 2005. *Chlamydia trachomatis* enters a viable but non-cultivable (persistent) state within herpes simplex virus type 2 (HSV-2) co-infected host cells. Cell. Microbiol. 8: 149-162.
9. Jalal, H., Stephen, H., Curran, M.D., Burton, J., Bradley, M. and Carne, C. 2006. Development and validation of a rotor-gene real-time PCR assay for detection, identification and quantification of *Chlamydia trachomatis* in a single reaction. J. Clin. Microbiol. 44: 206-213.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## SOURCE

C. trachomatis MOMP (HT10) is a mouse monoclonal antibody raised against *Chlamydia trachomatis*.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

C. trachomatis MOMP (HT10) is recommended for detection of major outer membrane protein of *Chlamydia trachomatis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

## SELECT PRODUCT CITATIONS

1. Giles, D.K. and Wyrick, P.B. 2008. Trafficking of chlamydial antigens to the endoplasmic reticulum of infected epithelial cells. Microbes Infect. 10: 1494-1503.
2. Chiriaco, M.S., Primiceri, E., De Feo, F., Montanaro, A., Monteduro, A.G., Tinelli, A., Megha, M., Carati, D. and Maruccio, G. 2016. Simultaneous detection of multiple lower genital tract pathogens by an impedimetric immunochip. Biosens. Bioelectron. 79: 9-14.
3. Ibana, J.A., Sherchand, S.P., Fontanilla, F.L., Nagamatsu, T., Schust, D.J., Quayle, A.J. and Aiyar, A. 2018. *Chlamydia trachomatis*-infected cells and uninfected-bystander cells exhibit diametrically opposed responses to interferon γ. Sci. Rep. 8: 8476.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.