Monoclonal Anti-*Yersinia pestis* Outer Protein M (YopM), Clone 2A3.5B1.1A1 (produced *in vitro*)

Catalog No. NR-798

For research use only. Not for human use.

Contributor:
Susan C. Straley, Ph.D., Department of Microbiology, Immunology, and Molecular Genetics, University of Kentucky, Lexington, Kentucky, USA

Manufacturer:
BEI Resources

Product Description:
Antibody Class: IgG2bκ
Monoclonal antibody prepared against the *Yersinia pestis* (*Y. pestis*) outer protein M (YopM) was purified from clone 2A3.5B1.1A1 hybridoma supernatant by protein G affinity chromatography. The B cell hybridoma was generated by the fusion of NS-1 myeloma cells with immunized mouse splenocytes. The antibody is specific for the C-terminal 32 amino acid tail of YopM. The antibody may cross-react with YopM from *Y. enterocolitica* and *Y. pseudotuberculosis*.[1]

Y. pestis, the causative agent of plague, is a Gram-negative pathogen that infects many animal species, including humans, and is transmitted by arthropod vectors or aerosol droplets.[2] YopM is a protein expressed during infection by *Y. pestis* and is shown to be necessary for full virulence of *Y. pestis* in a mouse model of plague.[3] YopM is a very acidic 46 kDa protein that belongs to the LRR structural family of proteins and contains a 71 residue amino terminal leader, 15 LRRs of 20–22 residues each, and a 32 residue carboxy terminal tail. The target of YopM and its exact role in pathogenesis are not established.[4-6]

Material Provided:
Each vial of NR-798 contains approximately 0.1 mL of purified monoclonal antibody in PBS. The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:
NR-798 was packaged aseptically in screw-capped plastic cryovials and is provided frozen. NR-798 should be stored at -20°C or colder immediately upon arrival.

Functional Activity:
NR-798 is being released without confirmation of functional activity. The monoclonal antibody produced by hybridoma clone 2A3.5B1.1A1 has been reported to be specific for the C-terminal 32 amino acid tail of YopM by immunoblot analysis.[1]

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-*Yersinia pestis* Outer Protein M (YopM) Clone 2A3.5B1.1A1 (produced *in vitro*), NR-798."

Biosafety Level: 1
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:
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References:
1. Straley, S.C., Personal Communication.
2. Perry, R.D. and J.D. Fetherston. "*Yersinia pestis*–Etiologic Agent of Plague." Clin Microbiol Rev. 10 (1997): 35-66. Pubmed: 8993858.

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E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

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4. Nemeth, J. and S.C. Straley. "Effect of *Yersinia pestis* YopM on Experimental Plague." Infect. Immun. 58 (1997): 924-930. Pubmed: 9038298
5. Skrzypek, E., et al. "Application of a *Saccharomyces cerevisiae* Model to Study Requirements for Trafficking of Yersinia pestis YopM in Eucaryotic Cells." Infect. Immun. 71 (2003): 937-947. Pubmed: 12540576
6. Hines, J., et al. "Structure-Function Analysis of Yersinia pestis YopM's Interaction with Alpha-Thrombin to Rule on its Significance in Systemic Plague and to Model YopM's Mechanism of Binding Host Proteins." Microb Pathog. 30 (2001):193-209. Pubmed: 11312613

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E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898