

Neisseria meningitidis, Strain NM3222

Catalog No. NR-32215

For research use only. Not for use in humans.

Contributor:

Lee H. Harrison, M.D., Professor, Departments of Medicine and Infectious Diseases, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, USA; David S. Stephens, M.D., Vice President of Research Robert W. Woodruff Health Sciences Center, Director, Division of Infectious Diseases, Emory University School of Medicine, Atlanta, Georgia, USA; David S. B. Blythe, M.D., Assistant Director and State Epidemiologist, Maryland Department of Health and Mental Hygiene, Baltimore, Maryland, USA; David Barroso, Fundação Oswaldo Cruz, Rio de Janeiro, Brazil; Samir Saha, Department of Microbiology, Bangladesh Institute of Child Health, Dhaka Shishu Hospital, Dhaka, Bangladesh; and Leonard Mayer, Chief, Meningitis Laboratory, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Neisseriaceae*, *Neisseria*

Species: *Neisseria meningitidis*

Strain: NM3222

Serogroup: Y¹

Original Source: *Neisseria meningitidis* (*N. meningitidis*), strain NM3222 was isolated in 2009 from a human disease case in the USA.¹

Comments: *N. meningitidis*, strain NM3222 was deposited as member of serogroup Y. The complete genome of *N. meningitidis*, strain NM3222 was sequenced at the Genomic Sequencing Center for Infectious Diseases at [University of Maryland School of Medicine](http://www.genbank.org/GenBank) (GenBank: [APUU00000000](http://www.genbank.org/GenBank)).

N. meningitidis is an aerobic, Gram-negative diplococcus and is the leading causative agent of human bacterial meningitis.² This organism commonly exists asymptomatically as a commensal bacterium in the nasopharynx and is transmitted by aerosol or secretion.³ Humans are the only natural reservoir of *N. meningitidis* and distribution of the 13 serogroups is highly dependent on region. Occasional epidemics have been associated with encapsulated strains in serogroups A, B, C, W-135 and Y.^{3,4} *N. meningitidis* is able to escape host immunity by transformative and recombinant genetic variability, including capsule switching, which is believed to have contributed to global outbreaks of certain serogroups, raising efforts for vaccine development and disease surveillance.^{4,5,6} Polysaccharide vaccines are available for serogroups A, C, W-135 and Y but limited for serogroup B.^{3,4}

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in *Haemophilus* Test medium supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-32215 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:

Media:

Haemophilus Test medium or equivalent

Chocolate agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic with 5% CO₂

Propagation:

1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 1 to 2 days.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Neisseria meningitidis*, Strain NM3222, NR-32215."

Biosafety Level: 2

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 (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries

arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale. This material may be subject to third party patent rights.

References:

1. Harrison, L. H., Personal Communication.
2. Knapp, J. S. "Historical Perspectives and Identification of *Neisseria* and Related Species." Clin. Microbiol. Rev. 1 (1988): 415-431. PubMed: 3069201.
3. Rosenstein, N. E., et al. "Meningococcal Disease." N. Engl. J. Med. 344 (2001): 1378-1388. PubMed: 11333996.
4. Harrison, L. H., C. L. Trotter and M. E. Ramsay. "Global Epidemiology of Meningococcal Disease." Vaccine 27 (2009): B51-B63. PubMed: 19477562.
5. Bratcher, H. B., J. S. Bennett and M. C. J. Maiden. "Evolutionary and Genomic Insights into Meningococcal Biology." Future Microbiol. 7 (2012): 873-885. PubMed: 22827308.
6. Swartley, J. S., et al. "Capsule Switching of *Neisseria meningitidis*." Proc. Natl. Acad. Sci. USA 94 (1997): 271-276. PubMed: 8990198.

ATCC® is a trademark of the American Type Culture Collection.

