

***Bacillus anthracis*, Strain Sterne BA866 ($\Delta asbF$)**

Catalog No. NR-9994

For research use only. Not for human use.

Contributor:

Philip Hanna, Associate Professor, Department of Microbiology and Immunology, University of Michigan Medical School, Ann Arbor, Michigan.

Product Description:

Bacteria Classification: *Bacillaceae*, *Bacillus*, *Bacillus cereus* group

Species: *Bacillus anthracis*

Strain: Sterne BA866

Original Source: *Bacillus anthracis* (*B. anthracis*), strain Sterne BA866 is an 810 bp deletion mutant ($\Delta asbF$) of the toxigenic acapsulate original Sterne strain (34F2).^{1,2}

Comment: Genome sequence information for the parent strain *B. anthracis*, Sterne 34F2 is available at [Pathema Bioinformatics Resource Center](#).

B. anthracis is an aerobic, Gram-positive, spore-forming, rod-shaped bacillus that causes the acute infectious disease anthrax. Herbivores are the natural hosts and become infected by consuming soil. Humans are incidentally infected by coming into contact with infected animals or their products. *B. anthracis* virulence is dependent on the possession of two large plasmids, pXO1 and pXO2, which are responsible for the expression of an extracellular toxin and a polysaccharide capsule, respectively. The extracellular toxin is composed of three proteins: lethal factor, edema factor, and protective antigen.³

The presence of pXO1 and absence of pXO2 in NR-9994 has been confirmed by PCR amplification of plasmid-specific sequences from extracted DNA.

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Tryptic Soy Broth supplemented with 10% glycerol.

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

Packaging/Storage:

NR-9994 was packaged aseptically, in screw-capped plastic 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:

Tryptic Soy Broth or equivalent

Tryptic Soy Agar with 5% sheep blood, or equivalent

Incubation:

Temperature: 35 to 37°C

Atmosphere: Aerobic

Propagation:

1. Keep vial frozen until ready for use; thaw slowly.
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 tubes and plate at 35 to 37°C for 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was contributed by P. Hanna, University of Michigan for distribution by the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Bacillus anthracis*, Strain Sterne BA866 ($\Delta asbF$), NR-9994."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm. This publication recommends that all persons working in or entering laboratory or animal care areas where frequent activities with clinical specimens or diagnostic cultures of *Bacillus anthracis* are being conducted should have documented evidence of satisfactory vaccination.

Disclaimers:

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References:

1. Lee, J. Y., et al. "Biosynthetic Analysis of the Petrobactin Siderophore Pathway from *Bacillus anthracis*." J. Bacteriol. 189 (2007): 1698-1710. PubMed: 17189355.
2. Sterne, M. "The Immunization of Laboratory Animals against Anthrax." Onderstepoort J. Vet. Sci. Anim. Ind. 13 (1939): 313-317.
3. Oncü, S., S. Oncü, and S. Sakarya. "Anthrax-An Overview." Med. Sci. Monit. 9 (2003): RA276-RA283. PubMed: 14586293.
4. Pflieger, B. F., et al. "Structural and Functional Analysis of AsbF: Origin of the Stealth 3,4-Dihydroxybenzoic Acid Subunit for Petrobactin Biosynthesis." Proc. Natl. Acad. Sci. USA 105 (2008): 17133-17138. PubMed: 18955706.
5. Spencer, R. C. "*Bacillus anthracis*." J. Clin. Pathol. 56 (2003): 182-187. PubMed: 12610093.

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