

### ***Bacillus thuringiensis*, Strain HD522**

#### **Catalog No. NR-611**

(Derived from ATCC® 35646™)

#### **For research only. Not for human use.**

#### **Contributor:**

ATCC®

#### **Product Description:**

Bacteria Classification: *Bacillaceae*, *Bacillus*

Species: *Bacillus thuringiensis*

Strain: HD522 (ONR60, Goldberg 60)

Serovar: *Israelensis*

Serotype: H<sub>14</sub>

Isolation: *Bacillus thuringiensis* (*B. thuringiensis*), strain HD522 was isolated from a raw sewage pond of Kibbutz Hulda, Israel in 1977.<sup>1,2</sup>

Comment: NR-611 was deposited to the ATCC® by the USDA as *B. thuringiensis*, strain HD522 and is known to produce insecticidal toxins.<sup>2</sup> The whole genome shotgun sequence of *B. thuringiensis* serovar *israelensis* is available in draft form (GenBank: AAJM00000000).

*B. thuringiensis* is a Gram-positive bacterium commonly found in soil. It is well-known for the production of insecticidal toxin during sporulation.<sup>1</sup> A large number of strains have been isolated from dead insects, most notably the lepidopterous species (moths and butterflies). Many of the toxin genes that are specific for a variety of insects have been studied and are being used in genetically modified plants which have been engineered to produce the toxin.<sup>3</sup>

#### **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-611 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 or equivalent

Incubation:

Temperature: 30°C

Atmosphere: Aerobic

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 slant and/or plate at 30°C for 24 hours.

#### **Citation:**

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Bacillus thuringiensis*, Strain HD522, NR-611."

#### **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, 2007; see [www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm)

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### References:

1. Goldberg, L. J. and J. Margalit. "A Bacterial Spore Demonstrating Rapid Larvicidal Activity against *Anopheles sergentii*, *Uranotaenia unguiculata*, *Culex univittatus*, *Aedes aegypti* and *Culex pipiens*." Mosq. News 37 (1977): 355-358.
2. Temeyer, K. B. "Larvicidal Activity of *Bacillus thuringiensis* subsp. *israelensis* in the Dipteran *Haematobia irritans*." Appl. Environ. Microbiol. 47 (1984): 952-955. PubMed: 6742837.
3. Roh, J. Y., et al. "*Bacillus thuringiensis* as a Specific, Safe, and Effective Tool for Insect Pest Control." J. Microbiol. Biotechnol. 17 (2007): 547-559. PubMed: 18051264.

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