Bacillus thuringiensis subsp. *konkukian,* Strain 97-27

Catalog No. NR-12265

For research only. Not for human use.

Contributor:

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Product Description:

Bacteria Classification: *Bacillaceae, Bacillus*
Species: *Bacillus thuringiensis* subsp. *konkukian*
Strain: 97-27
Serotype: H34[1]
Original Source: *Bacillus thuringiensis* (*B. thuringiensis*) subsp. *konkukian*, strain 97-27 was isolated in 1995 from the wound of a healthy 28-year-old French soldier who was injured by a land mine explosion in the former Yugoslavia.[2,3]

B. thuringiensis is a Gram-positive bacterium commonly found in soil. It is well known for the production of insecticidal toxin during sporulation.[4] 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 themselves.[4]

Genotyping of *B. thuringiensis* subsp. *konkukian,* strain 97-27 indicates genetic similarity to *B. anthracis*; though they do not share the chromosomally-encoded virulence genes, strain 97-27 has produced infection and myonecrosis in immunosuppressed mouse models.[2,5] *B. thuringiensis* subsp. *konkukian,* strain 97-27 contains the 77 kb plasmid pBT9727 and lacks the typical genes that encode the insecticidal proteins.[5]

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-12265 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: 37°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 37°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* subsp. *konkukian,* Strain 97-27, NR-12265."

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/bmbl5/bmbl5toc.htm

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References:

1. Lee, H. H., et al. "New Serovars of *Bacillus thuringiensis*: *B. thuringiensis* ser. *xoreanensis* (serotype H25), *B. thuringiensis* ser. *leesis* (serotype H33), and *B. thuringiensis* ser. *konkukian* (serotype H34)." J. Invertebr. Pathol. 63 (1994): 217-219. PubMed: 8176244.
2. Hernandez, E., et al. "*Bacillus thuringiensis* subsp. *konkukian* (serotype H34) Superinfection: Case Report and Experimental Evidence of Pathogenicity in Immunosupressed Mice." J. Clin. Microbiol. 36 (1998): 2138-2139. PubMed: 9650985.
3. Radnedge, L., et al. "Genome Differences that Distinguish *Bacillus anthracis* from *Bacillus cereus* and *Bacillus thuringiensis*." Appl. Environ. Microbiol. 69 (2003): 2755-2764. PubMed: 12732546.
4. 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.
5. Han, C. S., et al. "Pathogenomic Sequence Analysis of *Bacillus cereus* and *Bacillus thuringiensis* Isolates Closely Related to *Bacillus anthracis*." J. Bacteriol. 9 (2006): 3382-3390. PubMed: 16621833.

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