

***Yersinia pestis*, Strain Harbin 35**

Catalog No. NR-639

Product Description: *Yersinia pestis* (*Y. pestis*), strain Harbin 35 was isolated from a human in Manchuria in 1940. *Y. pestis*, strain Harbin 35 contains all three virulence plasmids, but lacks the chromosomal *p_{gm}* locus and is avirulent in mice.

Lot¹: 4464629

Manufacturing Date²: 16AUG2005

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ³ Biochemical characterization: Congo red agar ⁴ Conversion of nitrate to nitrite Fermentation of glycerol Urease	Gram-negative rods Report results No red colonies Report results Report results Negative	Gram-negative rods Circular, low convex, entire and opaque No red colonies Negative ⁵ Positive ⁵ Negative
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 510 base pairs)	Consistent with <i>Y. pestis</i> Identical to GenBank AF282306	Consistent with <i>Y. pestis</i> ⁶ Identical to GenBank AF282306
Confirmation of Deletion Next-Generation Sequencing (illumina [®] MiSeq)	Δp_{gm}	Δp_{gm} ⁷
Viability (post-freeze)³	Growth	Growth

¹*Y. pestis*, strain Harbin 35 was deposited by the Centers for Disease Control and Prevention, Division of Vector-Borne Infectious Diseases, Fort Collins, Colorado. The deposited material was prepared by Brain Heart Infusion broth culture of a single colony isolated from the CDC Reference Collection stock. NR-639 was prepared by Tryptic Soy broth culture of the deposited material.

²The manufacturing date indicated on the vial is incorrect.

³24 hours at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.

⁴7 days at 28°C in an aerobic atmosphere on Congo Red agar. The absence of red colonies on Congo Red agar indicates that the pigmentation locus is absent, and the strain is considered avirulent in mice.

⁵Results of conversion of nitrate to nitrite and glycerol fermentation indicate the biovar is mediaevalis.

⁶Also consistent with other *Yersinia* species

⁷Alignment of the NR-639 DNA sequence to the strain Harbin 35 sequence illustrates the 102 base pair deletion/replacement as described in Fetherston, J. D., P. Scheutze and R. D. Perry. "Loss of the Pigmentation Phenotype in *Yersinia pestis* is Due to the Spontaneous Deletion of 102 kb of Chromosomal DNA which is Flanked by a Repetitive Element." *Mol. Microbiol.* 6 (1992): 2693-2704. PubMed: 1447977.

Date: 27 APR 2016

Signature: 

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