

Genomic DNA from *Yersinia pestis*, Strain K25 Derivative 80 (D80)

Catalog No. NR-4727

Product Description: Genomic DNA was isolated from a preparation of *Yersinia pestis* (*Y. pestis*), strain K25 Derivative 80 (D80). *Y. pestis*, strain K25(D80) is an avirulent derivative of the K25 strain that contains the pMT1 and pPCP1 plasmids, but lacks the pCD1 plasmid that is essential for virulence as well as the unstable chromosomal *pgm* locus.

Lot¹: 58324527

Manufacturing Date: 23SEP2008

TEST	SPECIFICATIONS	RESULTS
Sequencing of 16S Ribosomal RNA Gene (~ 1440 bp)	Identical to BEI Resources NR-4703 Consistent with <i>Y. pestis</i>	Identical to BEI Resources NR-4703 Consistent with <i>Y. pestis</i> ²
Presence of Plasmids Confirmed by PCR Amplification pMT1 (pFra; 100 kb plasmid) pCD1 (pYV; 70 kb plasmid) pPCP1 (pPla; 9.5 kb plasmid)	Positive Negative Positive	Positive Negative Positive
Agarose Gel Electrophoresis	High molecular weight chromosomal DNA	High molecular weight chromosomal DNA (Figure 1)
Concentration by PicoGreen® Measurement	4 to 6 µg in 25 to 100 µL per vial	5.1 µg in 26 µL per vial (193 µg/mL)
Functional Activity by PCR Amplification <i>Y. pestis</i> specific sequence (YPO0396) ³ 16S ribosomal RNA gene Virulence-associated plasmids pMT1 (pFra; 100 kb plasmid) pCD1 (pYV; 70 kb plasmid) pPCP1 (pPla; 9.5 kb plasmid)	~ 800 bp amplicon ~ 1500 bp amplicon ~ 1200 bp amplicon None detected ~ 400 bp amplicon	~ 800 bp amplicon ~ 1500 bp amplicon ~ 1200 bp amplicon None detected ~ 400 bp amplicon
OD₂₆₀/OD₂₈₀ Ratio	1.7 to 1.9	1.8
Bacterial Inactivation 10% of total yield plated on Tryptic Soy Agar ^{4,5}	No viable bacteria detected	No viable bacteria detected

¹*Y. pestis*, strain K25(D80) was deposited by Professor Robert R. Brubaker of the Department of Microbiology and Molecular Genetics at Michigan State University, East Lansing, Michigan. The bacterial preparation used for extraction of genomic DNA was produced by broth (Tryptic Soy Broth; BD 211768) culture of the deposited material. After incubation for 48 hours at 28°C and aerobic atmosphere, genomic DNA was extracted using proprietary technology.

²Also consistent with other *Yersinia* species

³Sequence locus tag YPO0396 codes for an uncharacterized protein that is highly conserved in *Y. pestis*

⁴7 days at 28°C in an aerobic atmosphere

⁵An extraction procedure was used that has been shown to consistently inactivate 100% of Gram-negative bacteria.

Date: 05 NOV 2008

Signature: Signature on File

Title: Technical Manager, BEI Authentication or designee

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