

Yersinia pestis, Strain Kuma Derivative 7 (D7)

Catalog No. NR-4690

Product Description: Yersinia pestis (Y. pestis) is an aerobic, non-spore-forming, Gram-negative rod-shaped bacterium. Y. pestis, strain Kuma(D7) is an avirulent derivative of the Kuma strain which contains the pMT1 and pPCP1 plasmids as well as the unstable *pgm* locus, but lacks the pCD1 plasmid that is essential for virulence.

Lot¹: 57753202

Manufacturing Date: 13JUL2007

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology ²	Report results	Circular, slightly irregular, low convex, opaque (Figure 1)
Congo red (CR) agar ^{3,4}	Red colonies (Crb ⁺)	Red colonies (Crb ⁺)
Biochemical Analyses	· · · · · · · · · · · · · · · · · · ·	, ,
Analytical profile index (API 20 E [®])	Consistent with Y. pestis	Consistent with Y. pestis
Nitrate reduction	Positive	Positive
Fermentation of glycerol	Positive	Positive
Urease	Negative	Negative
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1440 bp)	Consistent with Y. pestis	Consistent with Y. pestis ⁵
PCR Assay of Extracted DNA		
16S ribosomal RNA gene	~ 1500 bp amplicon	~ 1500 bp amplicon
Presence of virulence-associated plasmids		
pMT1 (pFra; 100 kb plasmid)	~ 1200 bp amplicon	~ 1200 bp amplicon
pCD1 (pYV; 70 kb plasmid)	None detected	None detected
pPCP1 (pPla; 9.5 kb plasmid)	~ 400 bp amplicon	~ 400 bp amplicon
Viability (post-freeze) ⁴	Growth on agar	Growth on agar

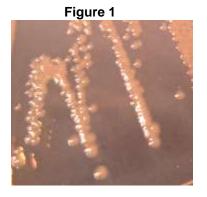
¹Y. pestis, strain Kuma(D7) was deposited by Professor Robert R. Brubaker of the Department of Microbiology and Molecular Genetics at Michigan State University, East Lansing, Michigan. NR-4690 was prepared by broth (Tryptic Soy Broth; BD 211768) culture of the deposited material. Broth inoculum was added to Kolles which were grown 48 hours at 28°C and aerobic atmosphere to produce this lot.

²48 hours at 28°C and aerobic atmosphere on Tryptic Soy Agar (BD 236950)

³1 to 4 days at 28°C and aerobic atmosphere on CR agar

⁴Hare, J. M. and K. A. McDonough. "High-Frequency RecA-Dependent and -Independent Mechanisms of Congo Red Binding Mutations in Yersinia pestis." J. Bacteriol. 181 (1999): 4896-4904. PubMed: 10438760.

⁵Also consistent with other Yersinia species



Biodefense and Emerging Infections Research Resources Repository P.O. Box 4137 Manassas, VA 20108-4137 USA www.beiresources.org 800-359-7370 Fax: 703-365-2898 E-mail: <u>contact@beiresources.org</u>



Date: 04 SEP 2008

Signature: Signature on File

Title: Technical Manager, BEI Authentication or designee

ATCC[®], on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC[®]'s knowledge.

ATCC[®] is a trademark of the American Type Culture Collection. You are authorized to use this product for research use only. It is not intended for human use.

