

## **Certificate of Analysis for HM-783D**

Genomic DNA from Microbial Mock Community B (Staggered, Low Concentration), v5.2L, for 16S rRNA Gene Sequencing

Catalog No. HM-783D

**Product Description:** A mixture of genomic DNA from 20 bacterial strains containing staggered ribosomal RNA operon counts (1,000-1,000,000 operons per organism per  $\mu$ L). Note: The label for HM-783D is incorrect. HM-783D contains genomic DNA from microbial mock community B and not microbial mock community A.

Lot<sup>1,2</sup>: 60304010 Manufacturing Date: 31AUG2011

TEST	SPECIFICATIONS	RESULTS
DNA Sequencing of Individual 16S Ribosomal RNA Genes from Mock Community B (~ 1500 base pairs)	Consistent with Acinetobacter baumannii Consistent with Actinomyces odontolyticus Consistent with Bacillus cereus Consistent with Bacteroides vulgatus Consistent with Clostridium beijerinckii Consistent with Deinococcus radiodurans Consistent with Enterococcus faecalis Consistent with Escherichia coli Consistent with Helicobacter pylori Consistent with Lactobacillus gasseri Consistent with Listeria monocytogenes Consistent with Neisseria meningitidis Consistent with Propionibacterium acnes Consistent with Pseudomonas aeruginosa Consistent with Staphylococcus aureus Consistent with Staphylococcus aureus Consistent with Streptococcus agalactiae Consistent with Streptococcus mutans Consistent with Streptococcus pneumoniae	Consistent with Acinetobacter baumannii <sup>§</sup> Consistent with Actinomyces odontolyticus <sup>§</sup> Consistent with Bacillus cereus <sup>§</sup> Consistent with Bacteroides vulgatus <sup>§</sup> Consistent with Clostridium beijerinckii <sup>†</sup> Consistent with Deinococcus radiodurans <sup>§</sup> Consistent with Enterococcus faecalis <sup>§</sup> Consistent with Escherichia coli <sup>‡</sup> Consistent with Helicobacter pylori <sup>†</sup> Consistent with Lactobacillus gasseri <sup>‡</sup> Consistent with Listeria monocytogenes <sup>§</sup> Consistent with Neisseria meningitidis <sup>†</sup> Consistent with Propionibacterium acnes <sup>§,3</sup> Consistent with Pseudomonas aeruginosa <sup>‡</sup> Consistent with Staphylococcus aureus <sup>§,4</sup> Consistent with Staphylococcus aureus <sup>§,4</sup> Consistent with Streptococcus agalactiae <sup>§</sup> Consistent with Streptococcus mutans <sup>§</sup> Consistent with Streptococcus mutans <sup>§</sup> Consistent with Streptococcus mutans <sup>§</sup>
Agarose Gel Electrophoresis	High molecular weight chromosomal DNA	High molecular weight chromosomal DNA (Figure 1)

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TEST	SPECIFICATIONS	RESULTS
Theoretical DNA Concentration for Individual Members of Mock Community B [based on number of ribosomal RNA (rRNA) operons input DNA]  Acinetobacter baumannii -10,000 operons Actinomyces odontolyticus -1,000 operons Bacillus cereus - 100,000 operons Bacteroides vulgatus - 1,000 operons Clostridium beijerinckii - 100,000 operons Deinococcus radiodurans - 1,000 operons Enterococcus faecalis - 1,000operons Escherichia coli - 1,000,000 operons Helicobacter pylori - 10,000 operons Lactobacillus gasseri - 10,000 operons Listeria monocytogenes - 10,000 operons Neisseria meningitidis - 10,000 operons Propionibacterium acnes - 100,000 operons Pseudomonas aeruginosa - 100,000 operons Staphylococcus aureus - 100,000 operons Staphylococcus epidermidis - 1,000,000 operons Streptococcus mutans - 1,000,000 operons Streptococcus pneumoniae - 1,000 operons	Report results	8.2 pg/μL Acinetobacter baumannii <sup>§</sup> 1.0 pg/μL Actinomyces odontolyticus <sup>§</sup> 45 pg/μL Bacillus cereus <sup>§</sup> 0.8 pg/μL Bacteriodes vulgatus <sup>§</sup> 44 pg/μL Clostridium beijerinckii <sup>‡</sup> 1.0 pg/μL Deinococcus radiodurans <sup>§</sup> 0.7 pg/μL Enterococcus faecalis <sup>§</sup> 680 pg/μL Escherichia col <sup>‡</sup> 8.6 pg/μL Helicobacter pylori <sup>†</sup> 3.2 pg/μL Lactobacillus gasseri <sup>‡</sup> 5.0 pg/μL Listeria monocytogenes <sup>§</sup> 5.8 pg/μL Neisseria meningitidis <sup>†</sup> 8.8 pg/μL Propionibacterium acnes <sup>§</sup> 160 pg/μL Pseudomonas aeruginosa <sup>‡</sup> 1400 pg/μL Rhodobacter sphaeroides <sup>‡</sup> 59 pg/μL Staphylococcus aureus <sup>§</sup> 510 pg/μL Staphylococcus agalactiae <sup>§</sup> 420 pg/μL Streptococcus mutans <sup>§</sup> 0.6 pg/μL Streptococcus pneumoniae <sup>§</sup>
Total Amount of DNA per vial	≥ 5 ng per µL	5.5 ng per µL
Functional Activity by PCR Amplification 16S ribosomal RNA gene	~ 1500 bp amplicon	~ 1500 bp amplicon (Figure 1)
OD <sub>260</sub> /OD <sub>280</sub> Ratio	Report results	1.9
Bacterial Inactivation <sup>5</sup> 10% of total yield plated on Tryptic Soy agar with 5% sheep blood <sup>5</sup>	No viable bacteria detected	No viable bacteria detected

Preparation and QC testing (with the exception of Bacterial Inactivation) were performed by Baylor College of Medicine in Houston, Texas.

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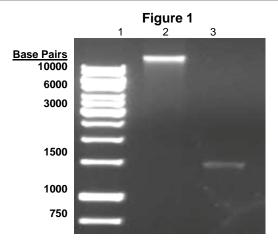
<sup>&</sup>lt;sup>2</sup>Genomic DNA was extracted using the following methods: §SDS Lysis, CsCl, <sup>‡</sup>Modified SDS Lysis, CsCl, <sup>£</sup>Triton Lysis, CsCl, and <sup>†</sup>Omega E.Z.N.A.® Bacterial DNA Kit.

<sup>&</sup>lt;sup>3</sup>Also consistent with other *Propionibacterium* species

<sup>&</sup>lt;sup>4</sup>Also consistent with other *Staphylococcus* species <sup>5</sup>7 days at 37°C under both anaerobic atmosphere (80% N<sub>2</sub>:10% CO<sub>2</sub>:10% H<sub>2</sub>) and aerobic atmospheric conditions



## **Certificate of Analysis for HM-783D**



Lane 1: 1 Kb DNA Ladder (Fermentas, Cat. No. SM0311)

Lane 2: 100 ng of gDNA HM-783D

Lane 3: PCR of 16S ribosomal RNA gene from HM-783D

**Date: 27 MAR 2015** 

Signature:

**Title:** Technical Manager, BEI Authentication or designee

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