

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 (rRNA) operon counts (1,000 to 1,000,000 copies per organism per µL). **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^{1,2}: 70005855

Manufacturing Date: 19JUL2017³

TEST	SPECIFICATIONS	RESULTS
DNA Sequencing of Individual 16S rRNA Genes from Mock Community B (~ 1500 base pairs)	Consistent with <i>Acinetobacter baumannii</i> Consistent with <i>Actinomyces odontolyticus</i> Consistent with <i>Bacillus cereus</i> Consistent with <i>Bacteroides vulgatus</i> Consistent with <i>Clostridium beijerinckii</i> Consistent with <i>Deinococcus radiodurans</i> Consistent with <i>Enterococcus faecalis</i> Consistent with <i>Escherichia coli</i> Consistent with <i>Helicobacter pylori</i> Consistent with <i>Lactobacillus gasseri</i> Consistent with <i>Listeria monocytogenes</i> Consistent with <i>Neisseria meningitidis</i> Consistent with <i>Propionibacterium acnes</i> Consistent with <i>Pseudomonas aeruginosa</i> Consistent with <i>Rhodobacter sphaeroides</i> Consistent with <i>Staphylococcus aureus</i> Consistent with <i>Staphylococcus epidermidis</i> Consistent with <i>Streptococcus agalactiae</i> Consistent with <i>Streptococcus mutans</i> Consistent with <i>Streptococcus pneumoniae</i>	Consistent with <i>Acinetobacter baumannii</i> [§] Consistent with <i>Actinomyces odontolyticus</i> [§] Consistent with <i>Bacillus cereus</i> [§] Consistent with <i>Bacteroides vulgatus</i> [§] Consistent with <i>Clostridium beijerinckii</i> [‡] Consistent with <i>Deinococcus radiodurans</i> [§] Consistent with <i>Enterococcus faecalis</i> [§] Consistent with <i>Escherichia coli</i> [‡] Consistent with <i>Helicobacter pylori</i> [†] Consistent with <i>Lactobacillus gasseri</i> [‡] Consistent with <i>Listeria monocytogenes</i> [§] Consistent with <i>Neisseria meningitidis</i> [†] Consistent with <i>Propionibacterium acnes</i> ^{§,4} Consistent with <i>Pseudomonas aeruginosa</i> [‡] Consistent with <i>Rhodobacter sphaeroides</i> [‡] Consistent with <i>Staphylococcus aureus</i> ^{§,5} Consistent with <i>Staphylococcus epidermidis</i> ^{§,5} Consistent with <i>Streptococcus agalactiae</i> [§] Consistent with <i>Streptococcus mutans</i> [§] Consistent with <i>Streptococcus pneumoniae</i> [§]
Agarose Gel Electrophoresis	High molecular weight chromosomal DNA	High molecular weight chromosomal DNA (Figure 1)

TEST	SPECIFICATIONS	RESULTS
<p>Theoretical DNA Concentration for Individual Members of Mock Community B (based on number of rRNA operons input DNA)^{6,7}</p> <p><i>Acinetobacter baumannii</i> - 10,000 operons <i>Actinomyces odontolyticus</i> - 1,000 operons <i>Bacillus cereus</i> - 100,000 operons <i>Bacteroides vulgatus</i> - 1,000 operons <i>Clostridium beijerinckii</i> - 100,000 operons <i>Deinococcus radiodurans</i> - 1,000 operons <i>Enterococcus faecalis</i> - 1,000 operons <i>Escherichia coli</i> - 1,000,000 operons <i>Helicobacter pylori</i> - 10,000 operons <i>Lactobacillus gasseri</i> - 10,000 operons <i>Listeria monocytogenes</i> - 10,000 operons <i>Neisseria meningitidis</i> - 10,000 operons <i>Propionibacterium acnes</i> - 10,000 operons <i>Pseudomonas aeruginosa</i> - 100,000 operons <i>Rhodobacter sphaeroides</i> - 1,000,000 operons <i>Staphylococcus aureus</i> - 100,000 operons <i>Staphylococcus epidermidis</i> - 1,000,000 operons <i>Streptococcus agalactiae</i> - 100,000 operons <i>Streptococcus mutans</i> - 1,000,000 operons <i>Streptococcus pneumoniae</i> - 1,000 operons</p>	Report results	<p>8.2 pg/μL <i>Acinetobacter baumannii</i>[§] 1.0 pg/μL <i>Actinomyces odontolyticus</i>[§] 45 pg/μL <i>Bacillus cereus</i>[§] 0.8 pg/μL <i>Bacteroides vulgatus</i>[§] 44 pg/μL <i>Clostridium beijerinckii</i>[‡] 1.0 pg/μL <i>Deinococcus radiodurans</i>[§] 0.7 pg/μL <i>Enterococcus faecalis</i>[§] 680 pg/μL <i>Escherichia coli</i>[¶] 8.6 pg/μL <i>Helicobacter pylori</i>[†] 3.2 pg/μL <i>Lactobacillus gasseri</i>[‡] 5.0 pg/μL <i>Listeria monocytogenes</i>[§] 5.8 pg/μL <i>Neisseria meningitidis</i>[†] 8.8 pg/μL <i>Propionibacterium acnes</i>[§] 160 pg/μL <i>Pseudomonas aeruginosa</i>[£]</p> <p>1400 pg/μL <i>Rhodobacter sphaeroides</i>[£]</p> <p>59 pg/μL <i>Staphylococcus aureus</i>[§]</p> <p>510 pg/μL <i>Staphylococcus epidermidis</i>[§] 32 pg/μL <i>Streptococcus agalactiae</i>[§] 420 pg/μL <i>Streptococcus mutans</i>[§] 0.6 pg/μL <i>Streptococcus pneumoniae</i>[§]</p>
Total Amount of DNA per vial	≥ 100 ng	104 ng
Functional Activity by PCR Amplification 16S ribosomal RNA gene	~ 1500 base pair amplicon	~ 1500 base pair amplicon (Figure 2)
OD₂₆₀/OD₂₈₀ Ratio	1.7 to 2.1	1.9
Bacterial Inactivation 10% of total yield plated on agar ⁸	No viable bacteria detected	No viable bacteria detected

¹Extraction of genomic DNA and sequencing of 16S ribosomal RNA genes were performed by Baylor College of Medicine in Houston, Texas, USA. Quality control testing was performed by BEI Resources.

²Genomic DNA was extracted using the following methods: [§]SDS Lysis, CsCl, [‡]Modified SDS Lysis, CsCl, [¶]Triton Lysis, CsCl and [†]Omega E.Z.N.A.[®] Bacterial DNA Kit.

³Genomic DNA was extracted on 31AUG2011 by Baylor College of Medicine and dispensed by BEI Resources on 19JUL2017.

⁴Also consistent with other *Propionibacterium* species

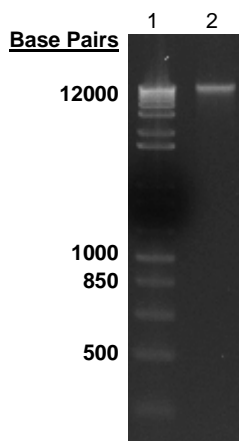
⁵Also consistent with other *Staphylococcus* species

⁶Theoretical DNA concentrations were determined by the contributor.

⁷The types and amounts of organisms present in the mock community is a best estimate. Please confirm these values prior to use.

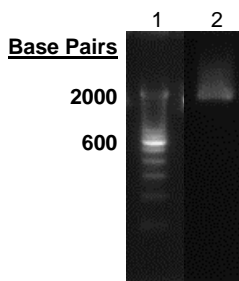
⁸14 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: High Molecular Weight Chromosomal DNA



Lane 1: Invitrogen™ TrackIt 1 Kb Plus DNA Ladder™
 Lane 2: 54 ng of gDNA HM-783D

Figure 2: Functional Activity by PCR Amplification



Lane 1: Invitrogen™ 100 bp Ladder™
 Lane 2: PCR of 16S rRNA gene from HM-783D

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