

Genomic DNA from Microbial Mock Community B (Even, Low Concentration), v5.1L, for 16S rRNA Gene Sequencing

Catalog No. HM-782D

Product Description: A mixture of genomic DNA from 20 bacterial strains containing equimolar (Even) ribosomal RNA (rRNA) operon counts (100,000 copies per organism per µL). **Note: The label for HM-782D is incorrect. HM-782D contains genomic DNA from microbial mock community B and not microbial mock community A.**

Lot^{1,2}: 70005857

Manufacturing Date: 20JUL2017³

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
Theoretical DNA Concentration for Individual Members of Mock Community B (based on number of rRNA operons input DNA)^{6,7} <i>Acinetobacter baumannii</i> - 100,000 operons <i>Actinomyces odontolyticus</i> - 100,000 operons <i>Bacillus cereus</i> - 100,000 operons <i>Bacteroides vulgatus</i> - 100,000 operons <i>Clostridium beijerinckii</i> - 100,000 operons <i>Deinococcus radiodurans</i> - 100,000 operons <i>Enterococcus faecalis</i> - 100,000 operons <i>Escherichia coli</i> - 100,000 operons <i>Helicobacter pylori</i> - 100,000 operons <i>Lactobacillus gasseri</i> - 100,000 operons <i>Listeria monocytogenes</i> - 100,000 operons <i>Neisseria meningitidis</i> - 100,000 operons <i>Propionibacterium acnes</i> - 100,000 operons <i>Pseudomonas aeruginosa</i> - 100,000 operons <i>Rhodobacter sphaeroides</i> - 100,000 operons <i>Staphylococcus aureus</i> - 100,000 operons <i>Staphylococcus epidermidis</i> - 100,000 operons <i>Streptococcus agalactiae</i> - 100,000 operons <i>Streptococcus mutans</i> - 100,000 operons <i>Streptococcus pneumoniae</i> - 100,000 operons	Report results	82 pg/μL <i>Acinetobacter baumannii</i> [§] 100 pg/μL <i>Actinomyces odontolyticus</i> [§] 45 pg/μL <i>Bacillus cereus</i> [§] 76 pg/μL <i>Bacteroides vulgatus</i> [§] 44 pg/μL <i>Clostridium beijerinckii</i> [‡] 100 pg/μL <i>Deinococcus radiodurans</i> [§] 70 pg/μL <i>Enterococcus faecalis</i> [§] 68 pg/μL <i>Escherichia coli</i> [‡] 86 pg/μL <i>Helicobacter pylori</i> [†] 32 pg/μL <i>Lactobacillus gasseri</i> [‡] 50 pg/μL <i>Listeria monocytogenes</i> [§] 58 pg/μL <i>Neisseria meningitidis</i> [†] 88 pg/μL <i>Propionibacterium acnes</i> [§] 160 pg/μL <i>Pseudomonas aeruginosa</i> [‡] 140 pg/μL <i>Rhodobacter sphaeroides</i> [‡] 59 pg/μL <i>Staphylococcus aureus</i> [§] 51 pg/μL <i>Staphylococcus epidermidis</i> [§] 32 pg/μL <i>Streptococcus agalactiae</i> [§] 42 pg/μL <i>Streptococcus mutans</i> [§] 55 pg/μL <i>Streptococcus pneumoniae</i> [§]
Total Amount of DNA per vial	≥ 100 ng	110 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	2.2 ⁸
Bacterial Inactivation 10% of total yield plated on agar ⁹	No viable bacteria detected	No viable bacteria detected

¹Extraction of genomic DNA and sequencing of 16S rRNA 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 20JUL2017.

⁴Also consistent with other *Propionibacterium* species

⁵Also consistent with other *Staphylococcus* species

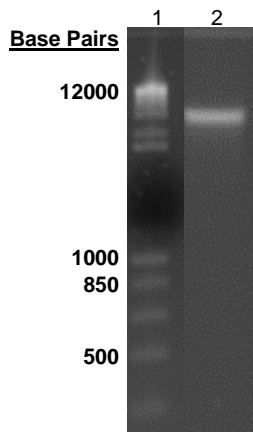
⁶Theoretical DNA concentrations were determined by the contributor.

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

⁸The OD₂₆₀/OD₂₈₀ ratio falls above the current specification, but does not negatively impact the final product.

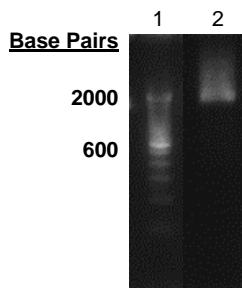
⁹14 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood

Figure 1: High Molecular Weight Chromosomal DNA



Lane 1: Invitrogen™ TrackIt 1 Kb Plus DNA Ladder™
 Lane 2: 200 ng of gDNA HM-782D

Figure 2: Functional Activity by PCR Amplification



Lane 1: Invitrogen™ 100 bp Ladder™
 Lane 2: PCR of 16S rRNA gene from HM-782D

02 APR 2018

Program Manager or designee, ATCC Federal Solutions

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