Certificate of Analysis for HM-782D

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 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]: 60304009 **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 *Rhodobacter sphaeroides* Consistent with *Staphylococcus aureus* Consistent with *Staphylococcus epidermidis* Consistent with *Streptococcus agalactiae* Consistent with *Streptococcus mutans* Consistent with *Streptococcus pneumoniae*	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*[§,3] Consistent with *Pseudomonas aeruginosa* [£] Consistent with *Rhodobacter sphaeroides* [£] Consistent with *Staphylococcus aureus*[§,4] Consistent with *Staphylococcus epidermidis*[§,4] Consistent with *Streptococcus agalactiae*[§] Consistent with *Streptococcus mutans*[§] Consistent with *Streptococcus pneumoniae*[§]
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* -100,000 operons *Actinomyces odontolyticus* -100,000 operons *Bacillus cereus* - 100,000 operons *Bacteroides vulgatus* - 100,000 operons *Clostridium beijerinckii* - 100,000 operons *Deinococcus radiodurans* - 100,000 operons *Enterococcus faecalis* - 100,000 operons *Escherichia coli* - 100,000 operons *Helicobacter pylori* - 100,000 operons *Lactobacillus gasseri* - 100,000 operons *Listeria monocytogenes* - 100,000 operons *Neisseria meningitidis* - 100,000 operons *Propionibacterium acnes* - 100,000 operons *Pseudomonas aeruginosa* - 100,000 operons *Rhodobacter sphaeroides* - 100,000 operons *Staphylococcus aureus* - 100,000 operons *Staphylococcus epidermidis* - 100,000 operons *Streptococcus agalactiae* - 100,000 operons *Streptococcus mutans* - 100,000 operons *Streptococcus pneumoniae* - 100,000 operons	Report results	82 pg/µL *Acinetobacter baumannii*[§] 100 pg/µL *Actinomyces odontolyticus*[§] 45 pg/µL *Bacillus cereus*[§] 76 pg/µL *Bacteroides vulgatus*[§] 44 pg/µL *Clostridium beijerinckii*[‡] 100 pg/µL *Deinococcus radiodurans*[§] 70 pg/µL *Enterococcus faecalis*[§] 68 pg/µL *Escherichia coli*[£] 86 pg/µL *Helicobacter pylori*[†] 32 pg/µL *Lactobacillus gasseri*[‡] 50 pg/µL *Listeria monocytogenes*[§] 58 pg/µL *Neisseria meningitidis*[†] 88 pg/µL *Propionibacterium acnes*[§] 160 pg/µL *Pseudomonas aeruginosa*[£] 140 pg/µL *Rhodobacter sphaeroides*[£] 59 pg/µL *Staphylococcus aureus*[§] 51 pg/µL *Staphylococcus epidermidis*[§] 32 pg/µL *Streptococcus agalactiae*[§] 42 pg/µL *Streptococcus mutans*[§] 55 pg/µL *Streptococcus pneumoniae*[§]
Total Amount of DNA per vial	≥ 5 ng per µL	7.2 ng per µL
Functional Activity by PCR Amplification 16S ribosomal RNA gene	~ 1500 base pair amplicon	~ 1500 base pair amplicon (Figure 1)
OD_{260}/OD_{280} Ratio	Report results	1.9
Bacterial Inactivation 10% of total yield plated on Tryptic Soy agar with 5% sheep blood[5]	No viable bacteria detected	No viable bacteria detected

[1]Preparation and QC testing (with the exception of Bacterial Inactivation) were performed by Baylor College of Medicine in Houston, Texas.
[2]Genomic 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.
[3]Also consistent with other *Propionibacterium* species
[4]Also consistent with other *Staphylococcus* species
[5]7 days at 37°C under both anaerobic atmosphere (80% N_2:10% CO_2:10% H_2) and aerobic atmospheric conditions

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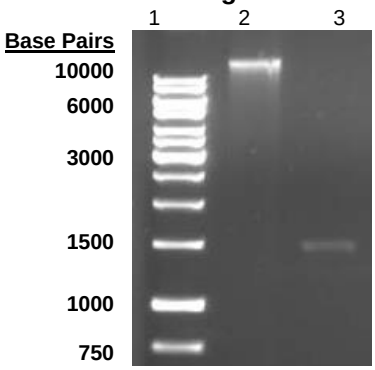
Figure 1



Lane 1: 1 Kb DNA Ladder (Fermentas, Cat. No. SM0311)
Lane 2: 100 ng of gDNA HM-782D
Lane 3: PCR of 16S ribosomal RNA gene from HM-782D

Date: 07 OCT 2014

Signature:

Title: Technical Manager, BEI Authentication or designee

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