Certificate of Analysis for HM-1292

Anaerococcus sp., Strain MJR7738A (Deposited as *Anaerococcus hydrogenalis*, Strain MJR7738A)

Catalog No. HM-1292

Product Description:

Anaerococcus sp., strain MJR7738A is a vaginal isolate obtained in 2014 from a pregnant woman with bacterial vaginosis in St. Louis, Missouri, USA. HM-1292 was deposited to BEI Resources as *Anaerococcus hydrogenalis*; however, digital DNA-DNA hybridization (dDDH) analysis performed at BEI Resources resulted in reclassification to *Anaerococcus* sp. HM-1292 was produced by inoculation of the deposited material into Modified Chopped Meat broth and grown for 2 days at 37°C in an anaerobic atmosphere (< 5% O_2; Remel™ Pack-Anaero™). Broth inoculum was passaged once in Modified Chopped Meat broth for 2 days at 37°C in an anaerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Note: Quality control of HMP material is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material. It should not be considered a complete characterization of the deposited organism.

Lot: 70009360 **Manufacturing Date: 27OCT2017**

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-negative cocci
Colony morphology	Report results	Circular, convex, entire, smooth and white (Figure 1)
Motility (wet mount)	Report results	Non-motile
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 760 base pairs)	≥ 99% sequence identity to *A. hydrogenalis*, strain MJR7738 (GenBank: LRPL01000137.1)	100% sequence identity to *A. hydrogenalis*, strain MJR7738 (GenBank: LRPL01000137.1)
Digital DNA-DNA hybridization (dDDH)[1]	≥ 70% for species identification	Not determined[2,3]
Purity (post-freeze)		
Anaerobic 7 days at 37°C on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Aerobic with 5% CO_2 7 days at 37°C on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology or no growth	No growth

[1]Relatedness between bacterial strains has traditionally been determined using DDH. For additional information, refer to Auch, A. F., et al. "Digital DNA-DNA Hybridization for Microbial Species Delineation by Means of Genome-to-Genome Sequence Comparison." Stand. Genomic Sci. 2 (2010): 117-134. PubMed: 21304684.

[2]The whole genome of *Anaerococcus* sp., strain MJR7738 (contig total length approximately 2.1 megabase pairs) was sequenced using the Illumina® MiSeq® system and was analyzed and assembled with Kraken version 2.1.3 and Unicycler v0.5.1.

[3]dDDH testing rules out all species listed in Figure 2; however, this does not rule out species for which the type strains' whole genome sequences are not available. HM-1292 represents a potential new species.

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Figure 1: Colony Morphology

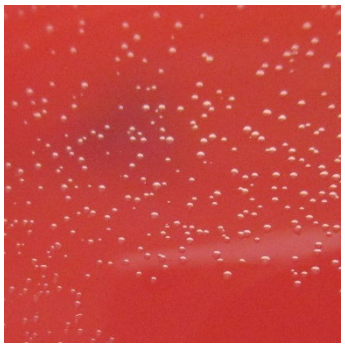

Figure 2: Digital DNA-DNA hybridization (dDDH)

Species	Strain	Accession Number	GGD[1] vs. HM-1292 (Deposited as *Anaerococcus hydrogenalis*)
Anaerococcus jeddahensis	SB3	GCA_001182725	64.1%
Peptoniphilus harei	NCTC 13076	GCA_900454685	51.5%
Anaerococcus rubeinfantis	mt16	GCA_001487145	50.4%
Anaerococcus ihuae	Marseille-Q5893^T	GCA_928368155	46.7%
Anaerococcus lactolyticus	ATCC® 51172™	GCA_000156575	37.2%
Anaerococcus obesiensis	ph10	GCA_000311745	35.5%
Anaerococcus vaginalis	ATCC® 51170™	GCA_000163295	34.9%
Anaerococcus degeneri	DSM 29674	GCA_017874475.1	34.5%
Anaerococcus pacaensis	9403502	GCA_000308255	31.5%
Anaerococcus senegalensis	JC48	GCA_000321005	31.0%
Anaerococcus hydrogenalis	DSM 7454	GCA_000173355	30.8%
Anaerococcus porci	DSM 101005	GCF_009696575	22.1%
Anaerococcus faecalis	AGMB00486	GCA_013371425	21.4%

[1]Genome-to-genome distance (GGD)

/Sonia Bjorum Brower/
Sonia Bjorum Brower 08 AUG 2025
Technical Manager or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected by ATCC® 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.

Support Provided by NIAID

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