

# Product Information Sheet for HM-1292

## **Anaerococcus hydrogenalis, Strain MJR7738A**

**Catalog No. HM-1292**

**For research use only. Not for human use.**

### **Contributor:**

Amanda Lewis, Ph.D., Assistant Professor, Department of Molecular Microbiology, Washington University School of Medicine, St. Louis, Missouri, USA

### **Manufacturer:**

BEI Resources

### **Product Description:**

**Bacteria Classification:** *Peptoniphilaceae*, *Anaerococcus*

**Species:** *Anaerococcus hydrogenalis*

**Strain:** MJR7738A

**Original Source:** *Anaerococcus hydrogenalis*

(*A. hydrogenalis*), strain MJR7738A is a vaginal isolate obtained in 2014 from a pregnant woman with bacterial vaginosis in St. Louis, Missouri, USA.<sup>1,2</sup>

**Comments:** *A. hydrogenalis*, strain MJR7738A ([HMP ID 3224](#)) is a reference genome for [The Human Microbiome Project](#) (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *A. hydrogenalis*, strain MJR7738A was sequenced at the Genome Institute at [Washington University](#) (GenBank: [LRPL000000000](#)).

**Note:** HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

*A. hydrogenalis* is strictly anaerobic, non-motile Gram-positive coccus isolated from feces and vaginal discharge.<sup>3,4</sup> It is also an opportunistic pathogen, responsible for infections of skin and soft tissue, chronic wounds and ovarian abscesses.<sup>4</sup>

### **Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in Modified Chopped Meat broth supplemented with 10% glycerol

**Note:** If homogeneity is required for your intended use, please purify prior to initiating work.

### **Packaging/Storage:**

HM-1292 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

### **Growth Conditions:**

#### **Media:**

Modified Reinforced Clostridial medium or Modified Chopped Meat medium or Mega2 medium (Appendix I)<sup>1</sup> or equivalent

Tryptic soy agar with 5% defibrinated sheep blood or equivalent

#### **Incubation:**

Temperature: 37°C

Atmosphere: Anaerobic

#### **Propagation:**

1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 2 to 3 days.

### **Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Anaerococcus hydrogenalis*, Strain MJR7738A, HM-1292."

### **Biosafety Level: 1**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. [Biosafety in Microbiological and Biomedical Laboratories](#). 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see [www.cdc.gov/biosafety/publications/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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**References:**

1. Lewis, A., Personal Communication.
2. [HMP ID 3224](#) (*A. hydrogenalis*, strain MJR7738A)
3. Ezaki, T., et al. "*Peptostreptococcus hydrogenalis* sp. nov. from Human Fecal and Vaginal Flora." Int. J. Syst. Bacteriol. 40 (1990): 305-306.
4. Murphy, E. C. and I. M. Frick. "Gram-Positive Anaerobic Cocci-Commensals and Opportunistic Pathogens." FEMS Microbiol. Rev. 37 (2013): 520-553. PubMed: 23030831.
5. Johnson, C. N., et al. "*Peptoniphilus stercorisuis* sp. nov., Isolated from a Swine Manure Storage Tank and Description of *Peptoniphilaceae* fam. nov." Int. J. Syst. Evol. Microbiol. 64 (2014): 3538-3545. PubMed: 25056296.

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## APPENDIX I: MEGA2 MEDIA

The following stock powders and solutions must be prepared first:

### 100X Dry Microsalts

NaHCO <sub>3</sub>	4 g
MgSO <sub>4</sub> ·7H <sub>2</sub> O	2 g
NaCl	8 g
CaCl <sub>2</sub>	0.08 g
FeSO <sub>4</sub>	0.04 g

### 10X Dry Super Mix

Tryptone peptone	100 g
Bacto Yeast Extract	50 g
Glucose	20 g
Cysteine (free base)	5 g
KH <sub>2</sub> PO <sub>4</sub>	41 g
K <sub>2</sub> HPO <sub>4</sub>	122 g
100X dry microsalts	1.012 g

### Vitamin K solution

Dissolve 10 mg menadione (vitamin K, Sigma-M5625) in 10 mL of 100% EtOH

### Hematin-Histidine solution

1. Prepare 0.2 M histidine (pH 8.0) by dissolving 2.1 g histidine-HCl monohydrate (Sigma-H7875) in 40 mL distilled H<sub>2</sub>O. Adjust pH from 4.0 to 8.0 with 10 N NaOH or 50% NaOH. Histidine will dissolve as pH rises. Bring final volume to 50 mL with Milli-Q water.
2. Dissolve 12 mg hematin (Sigma-H3281) in 10 mL of 0.2 M histidine (pH 8.0). Filter sterilize.

### MEGA2 media (1 L broth or plates)

1. In a 1 L media bottle, combine approximately 450mL H<sub>2</sub>O and the ingredients below:

Tween 80	100 µL
10X dry super mix	17 g
Meat extract	5g
Cellobiose	0.5 g
Maltose	0.5 g
Fructose	0.5 g
Sodium Acetate	0.5 g
Sodium Sulfate	1 g
Malic Acid	0.5 g
Agar (plates only)	15 g
2. Add a stir bar and heat the solution on a hot plate for as long as it takes to dissolve. Autoclave for 25 minutes.
3. Allow the solution to cool for about 20-25 minutes. Add the following ingredients.

Vitamin K	500 µL
Hematin-Histidine Solution	500 µL
ATCC® Vitamin Supplement (ATCC® MD-VS™)	500 µL
ATCC® Trace Mineral Supplement (ATCC® MD-TMS™)	500 µL
4. Bring to 1 L with water. For broth, filter sterilized using a 0.22 µm filter flask. Media does not need to be filter sterilized prior to pouring plates. Allowed the media to equilibrate overnight in an anaerobic chamber to achieve an anaerobic state. Place at 4°C for long-term storage.