## **Certificate of Analysis for HM-412**

## Bifidobacterium breve, Strain EX336960VC19

Catalog No. HM-412

**Product Description:** *Bifidobacterium breve* (*B. breve*), strain EX336960VC19 was isolated from a human mid-vaginal wall in March 2010 in Richmond, Virginia, USA.

Lot<sup>1,2</sup>: 70005127 Manufacturing Date: 16JUN2017

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive rod	Gram-positive rod
Colony morphology <sup>3</sup>	Report results	Circular, convex, entire, smooth and gray (Figure 1)
Motility (wet mount)	Report results	Non-motile
VITEK® MS (MALDI-TOF)	B. breve	B. breve (99.9%)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 810 base pairs)	≥ 99% sequence identity to  B. breve type strain (GenBank: ACCG02000012.1)	99.9% sequence identity to  B. breve type strain (GenBank: ACCG02000012.1)
Purity (post-freeze)		
Anaerobic <sup>4</sup>	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Aerobic <sup>5</sup>	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze) <sup>3</sup>	Growth	Growth

<sup>&</sup>lt;sup>1</sup>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.

<sup>&</sup>lt;sup>5</sup>Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> on Tryptic Soy agar with 5% defibrinated sheep blood





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<sup>2</sup>B. breve, strain EX336960VC19 was deposited by Professor Gregory A. Buck, Director, Center for the Study of Biological Complexity, Department of Microbiology and Immunology, Virginia Commonwealth University Medical Center, Richmond, Virginia, USA. Lot 70005127 of HM-412 was produced by inoculation of BEI Resources HMS-412 (Lot: 60110261) into Modified Reinforced Clostridial broth and incubated for 2 days at 37°C in an anaerobic atmosphere (< 0.5% O₂; Remel™ Anaero Pack™). The material from the initial growth was passaged once in Modified Reinforced Clostridial broth for 2 days at 37°C in an anaerobic atmosphere to produce this lot.</p>

<sup>&</sup>lt;sup>3</sup>2 days at <sup>3</sup>7°C in an anaerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

Purity of this lot was assessed for 7 days at 37°C in an anaerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood



## **Certificate of Analysis for HM-412**

**Date:** 01 SEP 2017

Signature:

**BEI** Resources Authentication

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

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