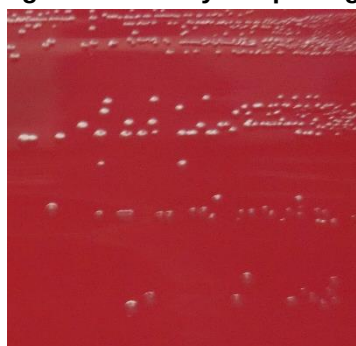


Bifidobacterium angulatum*, Strain F16_22*Catalog No. HM-1189****Product Description:** *Bifidobacterium angulatum* (*B. angulatum*), strain F16_22¹ was isolated from human stool in Guelph, Ontario, Canada.**Lot^{2,3}: 70015550****Manufacturing Date: 25MAY2018**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ⁴ Motility (wet mount)	Gram-positive rods Report results Report results	Gram-positive rods Circular, low convex, entire, smooth, translucent and gray (Figure 1) Non-motile
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1320 base pairs)	≥ 99% sequence identity to <i>B. angulatum</i> type strain (GenBank: D86182.1)	99.9% sequence identity to <i>B. angulatum</i> type strain (GenBank: D86182.1)
Purity (post-freeze) Anaerobic growth ⁵ Aerobic growth ⁶	Consistent with expected colony morphology No growth	Consistent with expected colony morphology No growth
Viability (post-freeze)⁴	Growth	Growth

¹Strain also referred to as F16 #22²Quality 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.³*B. angulatum*, strain F16_22 was deposited by Professor Emma Allen-Vercor, Department of Molecular and Cellular Biology, University of Guelph, Guelph, Ontario, Canada. HM-1189 lot 70015550 was produced by inoculation of BEI Resources HMS-1189 lot 63978613 into Modified Reinforced Clostridial broth and incubated for 1 day at 37°C in an anaerobic atmosphere (< 0.5% O₂; Remel™ Pack-Anaero™ R681001). Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles, which were grown for 1 day at 37°C in an anaerobic atmosphere to produce this lot.⁴1 day at 37°C in an anaerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood⁵Purity of this lot was assessed for 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an anaerobic atmosphere.⁶Purity of this lot was assessed for 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere with 5% CO₂.**Figure 1: Colony Morphology**

Certificate of Analysis for HM-1189

/Heather Couch/

Heather Couch

01 AUG 2018

Program Manager or designee, ATCC Federal Solutions

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