

***Mycobacterium sherrisii*, Strain FI-05200**

Catalog No. NR-49080

Product Description: *Mycobacterium sherrisii* (*M. sherrisii*), strain FI-05200 was isolated in Italy.

Lot¹: 64362439

Manufacturing Date: 01AUG2016

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis^{2,3} Cellular morphology Colony morphology ⁴ Growth rate Growth at 45°C Growth at 55°C Acid-fast stain Pigmentation in the dark (Scotochromogen) Photoinduction for 1 hour (Photochromogen) Nonchromogen (no pigment) Biochemical tests Catalase Catalase (semiquantitative) Catalase (68°C) Iron uptake Nitrate reduction Tween 80 hydrolysis Urease Growth in the presence of 5% sodium chloride Growth in the presence of thiophene-2-carboxylic acid hydrazide (TCH)	Rods Report results ≥ 7 days Report results Report results Positive (red colonies) Report results Report results Report results Report results Positive Positive Report results Negative Negative Report results Positive Report results Positive	Rods Circular, convex, entire, rough and cream (Figure 1) 9 days Positive Positive Positive (red colonies) Negative (no pigment) Negative (no pigment) Positive Positive Negative⁵ Positive Negative Negative Negative Positive Positive Positive
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (1510 base pairs) Digital DNA-DNA hybridization (dDDH) ⁶	≥ 99% sequence identity to <i>M. sherrisii</i> type strain (GenBank: AY353699.1) ≥ 70% for species identification	99.1% sequence identity to <i>M. sherrisii</i> type strain (GenBank: AY353699.1) Not determined ^{7,8} (Table 1)
Purity (post-freeze) Middlebrook 7H10 agar with OADC enrichment ⁹ Tryptic Soy agar ⁹	Growth consistent with expected colony morphology Growth consistent with expected colony morphology	Growth consistent with expected colony morphology Growth consistent with expected colony morphology
Viability (post-freeze)⁴	Growth	Growth

¹NR-49080 was produced by inoculation of the deposited material into Middlebrook 7H9 broth with ADC enrichment and grown for 10 days at 37°C in an aerobic atmosphere with 5% CO₂. After 5 days at room temperature, broth inoculum was added to Middlebrook 7H10 agar with OADC enrichment kolles, which were grown for 6 days at 37°C in an aerobic atmosphere with 5% CO₂ to produce this lot.

²Information on Mycobacterium testing is available from Ribón, W. "Biochemical Isolation and Identification of Mycobacteria." *Biochemical Testing*. (2012) Jose C. Jimenez-Lopez (Ed.), InTech, <http://www.intechopen.com/books/biochemical-testing/biochemical-isolation-and-identification-of-mycobacteria> and Lévy-Frèbault, V. V. and F. Portaels. "Proposed Minimal Standards for the Genus *Mycobacterium* and for Description of New Slowly Growing *Mycobacterium* Species." *Int. J. Syst. Bacteriol.* 42 (1992): 315-323. PubMed: 1581193.

³Phenotypic characterization of *M. sherrisii* was performed following: van Ingen, J., et al. "*Mycobacterium sherrisii* sp. nov., a Slow-Growing Non-Chromogenic Species." *Int. J. Syst. Evol. Microbiol.* 61 (2011): 1293-1298. PubMed: 20639227.

⁴9 days at 37°C in an aerobic atmosphere with 5% CO₂ on Middlebrook 7H10 agar with OADC enrichment

⁵NR-49080 was deposited as *M. sherrisii* and reported by the depositor to be positive for catalase (semiquantitative). Testing performed in triplicate by BEI Resources indicates a negative result.

⁶Relatedness 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.

⁷The whole genome of *M. sherrisii*, strain FI-05200 (Contig Total length 5.6 megabase pairs) was sequenced using the Illumina® MiSeq® system and was assembled and analyzed with CLC Genomics Workbench Version 7.0.2.

⁸The required whole genome sequence for the type strain of this species is not available. dDDH testing rules out all species listed in Table 1, however, this does not rule out species for which the type strains whole genome sequences are not available.

⁹Purity of this lot was assessed for 9 days at 37°C in an aerobic atmosphere with 5% CO₂.

Figure 1: Colony Morphology



Table 1: Digital DNA-DNA hybridization (dDDH)

Species	Strain	Accession #	GGD vs. NR-49080 (Deposited as: <i>M. sherrisii</i>)
<i>M. abscessus</i> subsp. <i>abscessus</i>	Hauduroy L948 ^T	NC_010397.1	19.2
<i>M. abscessus</i> subsp. <i>bolletii</i>	BD ^T	AHAS00000000.1	19.2
<i>M. abscessus</i> subsp. <i>massiliense</i>	CCUG 48898 ^T	NZ_AP014547.1	19.5
<i>M. aromaticivorans</i>	JS19b1 ^T	JALN00000000.2	20
<i>M. aurum</i>	ATCC 23366 ^T	CVQQ01000001.1	19.7
<i>M. austroafricanum</i>	E9789-SA12441 ^T	HG964450.1	19.7
<i>M. avium</i> subsp. <i>avium</i>	ATCC 25291 ^T	ACFI00000000.1	23.5
<i>M. avium</i> subsp. <i>paratuberculosis</i>	ATCC 19698 ^T	AGAR00000000.1	24.1
<i>M. avium</i> subsp. <i>silvaticum</i>	6409 ^T	AYOC00000000.1	24
<i>M. bohemicum</i>	CIP 105808 ^T	CSTD01000001.1	23.1
<i>M. canariense</i>	502329 ^T	BCSY00000000.1	20
<i>M. celatum</i>	ATCC 51131 ^T	BBUN00000000.1	22
<i>M. chelonae</i>	CM 6388 ^T	CP010946.1	19.1
<i>M. chlorophenicolum</i>	PCP-I ^T	JYNL00000000.1	20
<i>M. chubuense</i>	48013 ^T	NC_018027.1	19.8
<i>M. colombiense</i>	10B ^T	AFVW00000000.2	23.3
<i>M. conceptionense</i>	D16 ^T	CTEF00000000.1	19.9
<i>M. cosmeticum</i>	LTA-388 ^T	CCBB00000000.1	20
<i>M. crocinum</i>	czh-42 ^T	BBHD00000000.1	21.5
<i>M. farcinogenes</i>	IEMVT 75 ^T	CCAY00000000.1	19.8
<i>M. fluoranthenvivorans</i>	FA4 ^T	BBFT00000000.1	21.2
<i>M. fortuitum</i> subsp. <i>fortuitum</i>	ATCC 6841 ^T	CP014258.1	19.7
<i>M. fortuitum</i> subsp. <i>acetamidolyticum</i>	NCH E11620 ^T	BCSZ00000000.1	19.8
<i>M. gastri</i>	ATCC 15754 ^T	AZYN00000000.1	21.9
<i>M. genavense</i>	2289 ^T	JAGZ00000000.1	26.4
<i>M. haemophilum</i>	ATCC 29548 ^T	CP011883.2	21.5
<i>M. hassiacum</i>	3849 ^T	ARBU00000000.1	20.1
<i>M. hodleri</i>	EMI2 ^T	BBGO00000000.1	22.6

Species	Strain	Accession #	GGD vs. NR-49080 (Deposited as: <i>M. sherrisii</i>)
<i>M. intracellulare</i>	ATCC 13950 ^T	NC_016946.1	23.1
<i>M. kansasii</i>	ATCC 12478 ^T	NC_022663.1	21.6
<i>M. kyorinense</i>	KUM 060204 ^T	BBKA00000000.1	21.6
<i>M. mageritense</i>	938 ^T	CCBF00000000.1	19.8
<i>M. neoaurum</i>	ATCC 25795 ^T	JMDW00000000.1	19.7
<i>M. neworleansense</i>	W6705 ^T	CWKH00000000.1	19.9
<i>M. novocastrense</i>	73 ^T	BCTA00000000.1	20
<i>M. obuense</i>	47001 ^T	JYNU00000000.1	19.8
<i>M. pallens</i>	czh-8 ^T	BBHE00000000.1	21.5
<i>M. parascrofulaceum</i>	HSC-68 ^T	ADNV00000000.1	23.5
<i>M. pseudoshottsii</i>	L15 ^T	BCND00000000.1	20.7
<i>M. pyrenivorans</i>	17A3 ^T	BBHB00000000.1	21.8
<i>M. rufum</i>	JS14 ^T	JROA00000000.1	19.9
<i>M. rutilum</i>	czh-117 ^T	BBHF00000000.1	23.8
<i>M. septicum</i>	W4964 ^T	CBMO00000000.1	19.8
<i>M. setense</i>	ABO-M06 ^T	JTJW00000000.1	19.8
<i>M. simiae</i>	ATCC 25275 ^T	CBMJ00000000.2	39.3
<i>M. smegmatis</i>	ATCC 19420 ^T	LN831039.1	20
<i>M. thermoresistibile</i>	ATCC 19527 ^T	BCTB00000000.1	20.1
<i>M. triplex</i>	90-1019 ^T	CCAU00000000.1	26.9
<i>M. tuberculosis</i>	H37Rv ^T	NC_000962.3	21.6
<i>M. vaccae</i>	ATCC 15483 ^T	BCRS00000000.1	19.9
<i>M. vanbaalenii</i>	PYR-1 ^T	NC_008726.1	19.9
<i>M. vulneris</i>	NLA000700772 ^T	CCBG00000000.1	20.1
<i>M. yongonense</i>	05-1390 ^T	NC_021715.1	23.1
<i>Nocardia asteroides</i>	NBRC 15531 ^T	BAFO00000000.2	19.5

Date: 25 JUL 2017

Signature:



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