SUPPORTING INFECTIOUS DISEASE RESEARCH

Escherichia coli, Strain 3152-1

Catalog No. NR-33195

Product Description: *Escherichia coli* (*E. coli*), strain 3152-1 (also referred to as UMEA 3152-1) was isolated in 1996 from human urine in Sweden. *E. coli*, strain 3152-1 was deposited as resistant to ampicillin, cefpodoxime, chloramphenicol, ciprofloxacin, gentamycin, mecillinam, streptomycin, sulfamethoxazole, tetracycline and trimethoprim and positive for the presence of virulence genes *fimH, ibeA, chuA, yjaA*.

Lot¹: 70004926

Manufacturing Date: 26APR2017

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology ²	Report results	Circular, convex, entire, mucoid and
		cream (Figure 1)
Motility (wet mount)	Report results	Motile
VITEK [®] 2 Compact (GN card)	E. coli (≥ 90% probability)	E. coli (98% probability) ³
Presence of virulence plasmids ⁴		
fimH	Sequence present	Sequence present
ibeΔ	Sequence present	Sequence present
chul	Sequence present	Sequence present
via	Sequence present	Sequence present
yja n		Sequence present
Antibiotic Susceptibility Profile ⁵		
VITEK [®] (AST-GN81 card)		
Ampicillin	Report results	Sensitive (≤ 2 µg/mL)
Amoxicillin/clavulanic acid	Report results	Sensitive (≤ 2 µg/mL)
Piperacillin/tazobactam	Report results	Sensitive (≤ 4 µg/mL)
Cefazolin	Report results	Intermediate (≤ 4 µg/mL)
Cefoxitin	Report results	Sensitive (≤ 4 µg/mL)
Ceftazidime	Report results	Sensitive (≤ 1 µg/mL)
Ceftriaxone	Report results	Sensitive (≤ 1 µg/mL)
Cefepime	Report results	Sensitive (≤ 1 µg/mL)
Ertapenem	Report results	Sensitive (≤ 0.5 µg/mL)
Meropenem	Report results	Sensitive (≤ 0.25 µg/mL)
Amikacin	Report results	Sensitive (≤ 2 µg/mL)
Gentamicin	Report results	Sensitive (≤ 1 µg/mL)
Tobramycin	Report results	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Report results	Sensitive (≤ 0.25 µg/mL)
Levofloxacin	Report results	Sensitive (≤ 0.12 µg/mL)
Tetracycline	Report results	Sensitive (≤ 1 µg/mL)
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	Sensitive (≤ 20 µg/mL)
Etest [®] antibiotic test strips ⁶		
Streptomycin	Report results	3 μg/mL
Chloramphenicol	Report results	Sensitive (1.5 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	\geq 99% sequence identity to <i>E. coli</i> ,	99.9% sequence identity to
(~ 750 base pairs)	strain UMEA 3152-1	E. coli, strain UMEA 3152-1
	(GenBank: AWBP01000016.1)	(GenBank: AWBP01000016.1)
Digital DNA-DNA hybridization (dDDH) ³	≥ 70% for species identification	<i>E. coli</i> , strain K12 (88.7%) ³
		<i>E. coli</i> (74.6%) ³

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Certificate of Analysis for NR-33195

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Purity (post-freeze) ⁸	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze) ²	Growth	Growth

¹NR-33195 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot.
²1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

³The whole genome of *E. coli*, strain 3152-1 (~ 4.7 megabase pairs) was sequenced using the Illumina[®] MiSeq[®] system and was assembled and analyzed with CLC Genomics Workbench Version 7.0.2.

⁴Percent probabilities above 90% indicate a close match to the typical biochemical pattern for the given organism. For additional information, please refer to O'Hara, C. M. and J. M. Miller. "Evaluation of the VITEK[®] 2 ID-GNB Assay for Identification of Members of the Family Enterobacteriaceae and Other Nonenteric Gram-Negative Bacilli and Comparison with the VITEK[®] GNI+ Card." J. Clin. Microbiol. 41 (2003): 2096-2101. PubMed: 12734254.

⁵Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

⁶1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

⁷Relatedness 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." <u>Stand Genomic Sci</u>, 2 (2010): 117-134, PubMed: 21304684.

⁸Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar.



Figure 1: Colony Morphology

13 JUN 2018

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