

***Shigella sonnei*, Strain WRAIR I Virulent**

Catalog No. NR-519

Product Description:

Shigella sonnei (*S. sonnei*), strain WRAIR I Virulent was originally deposited at ATCC® in 1978 by Dr. Don J. Brenner. NR-519 was produced by inoculation of BEI Resources seed lot 3860558 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. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70070580

Manufacturing Date: 15AUG2024

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology Motility (wet mount) VITEK® 2 (GN card)	Gram-negative rods Report results Report results <i>S. sonnei</i> (≥ 95%)	Gram-negative rods Irregular, flat, undulate, smooth and cream (Figure 1) Non-motile <i>S. sonnei</i> (99%)
Genotypic Analysis Next-Generation Sequencing (NGS) of Complete Genome ¹ Digital DNA-DNA hybridization (dDDH) ²	≥ 99% sequence identity to <i>S. sonnei</i> , strain WRAIR I Virulent (GenBank: CP026802.1) ≥ 70% for species identification	100% sequence identity to <i>S. sonnei</i> , strain WRAIR I Virulent (GenBank: CP026802.1) <i>Shigella sonnei</i> (99.4%) <i>Shigella boydii</i> (89.4%) <i>Shigella flexneri</i> (87.3%) <i>Shigella dysenteriae</i> (80.8%) <i>Escherichia coli</i> (74.2%)
Purity 7 days at 37°C in an aerobic atmosphere with and without CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹The whole genome of *S. sonnei*, strain strain WRAIR I Virulent (~ 4.6 megabase pairs) was sequenced using the Illumina® MiSeq® system and was assembled and analyzed using Kraken version 2.1.3CLC and Unicycler v0.5.0.

²Relatedness 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.

Figure 1: Colony Morphology



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09 MAY 2025

Technical Manager or designee, ATCC Federal Solutions

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