

***Yersinia enterocolitica* subsp. *enterocolitica*, Strain WA-C**

Catalog No. NR-211

(Derived from ATCC® 51872™)

For research only. Not for use in humans.

Contributor:

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Product Description:

Bacteria Classification: *Enterobacteriaceae*, *Yersinia*

Species: *Yersinia enterocolitica* subsp. *enterocolitica*^{1,2}

Strain: WA-C

Biotype: 1B

Serotype: O:8

Original Source: *Yersinia enterocolitica* (*Y. enterocolitica*) subsp. *enterocolitica*, strain WA-C is a plasmidless derivative of *Y. enterocolitica* subsp. *enterocolitica*, strain WA-314 (BEI Resources NR-210).³

Comments: *Y. enterocolitica* subsp. *enterocolitica*, strain WA-C was deposited at ATCC® by Dr. Alexander V. Rakin, Max von Pettenkofer-Institute of Hygiene and Medical Microbiology, University of Munich, Munich, Germany. Strain WA-C is a spontaneous nalidixic acid-resistant, pesticin-sensitive mutant.^{3,4} The complete genome of the parental strain, *Y. enterocolitica* subsp. *enterocolitica*, strain WA-314, is available (GenBank: [NZ_AKKR000000000.1](#)).

Y. enterocolitica subsp. *enterocolitica* is a significant food-borne enteropathogen which causes gastroenteritis.⁵ *Y. enterocolitica* subsp. *enterocolitica* is an extremely heterogeneous species, encompassing six biotypes and currently more than 50 serogroups, not all of which can cause disease.⁶ It is of particular concern to the food industry because it is a psychrotrophic pathogen able to proliferate at temperatures approaching 0°C.

Y. enterocolitica subsp. *enterocolitica* is a non-spore-forming, Gram-negative, rod-shaped coccobacillus. Virulence-associated genes are located on the chromosome and on the pYV (approximately 70 kb) plasmid found in typical virulent strains of *Y. enterocolitica* subsp. *enterocolitica*.^{7,8} This plasmid encodes a type III secretion system involved in the delivery of virulence proteins that contribute to internalization into host cells.⁸

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy Broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-211 was packaged aseptically, in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:

Media:

Brain Heart Infusion broth or Tryptic Soy broth or equivalent Tryptic Soy agar or Sheep Blood agar or equivalent

Incubation:

Temperature: 26°C⁹

Atmosphere: Aerobic

Propagation:

1. Keep vial frozen until ready for use; thaw slowly.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tubes and plate at 26°C for 1 to 2 days.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Yersinia enterocolitica* subsp. *enterocolitica*, Strain WA-C, NR-211."

Biosafety Level: 2

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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