

***Salmonella enterica* subsp. *enterica*, Strain E1093**

**Catalog No. NR-171**

(Derived from ATCC® 9239™)

**For research use only. Not for human use.**

**Contributor:**

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**Product Description:**

Bacteria Classification: *Enterobacteriaceae*, *Salmonella*

Species: *Salmonella enterica*

Subspecies: *Salmonella enterica* subsp. *enterica*<sup>1,2</sup> (formerly *Salmonella choleraesuis* subsp. *choleraesuis*)

Serovar: Oranienburg

Antigenic Properties: 6,7:m,t:-

Strain: E1093

Original Source: *Salmonella enterica* (*S. enterica*) subsp. *enterica* serovar Oranienburg, strain E1093 came from an outbreak of food poisoning at an Illinois State Hospital.

Comment: *S. enterica* subsp. *enterica*, strain E1093 was deposited at ATCC® in 1943 by Dr. O. Felsenfeld from the State of Illinois Department of Public Welfare, Chicago, IL.

*S. enterica* are a Gram-negative, rod-shaped, flagellated bacterial species that are divided into six subspecies (I, II, IIIa, IIIb, IV, VI). Only subspecies I, subsp. *enterica*, is considered of clinical relevance and may result in (nontyphoidal) salmonellosis, one of the most common food-borne diseases with an estimated 2 million cases that occur in the United States every year.<sup>3</sup> Pathogenicity results from a variety of virulence factors found in plasmids, prophages, and five pathogenicity islands which allow these organisms to colonize and infect host organisms.<sup>4,5</sup>

*S. enterica* subsp. *enterica* serovar Oranienburg is increasingly becoming a cause of nontyphoidal salmonellosis outbreaks. Serovar Oranienburg infection is unique in that it is not limited to gastroenteritis and can progress to sepsis, often followed by focal infections of the gall bladder, endothelial surfaces, soft tissues, and bones.<sup>6</sup>

**Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X 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-171 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:

Tryptic Soy Broth or equivalent

Tryptic Soy Agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic

Propagation:

1. Keep vial frozen until ready for use, then thaw.
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 37°C for 24 hours.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Salmonella enterica* subsp. *enterica*, Strain E1093, NR-171."

**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, 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see [www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm).

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**References:**

1. Judicial Commission of the International Committee on Systematics of Prokaryotes. "The Type Species of the Genus *Salmonella* Lignierres 1900 Is *Salmonella enterica* (ex Kauffmann and Edwards 1952) Le Minor and Popoff 1987, with the Type Strain LT2<sup>T</sup>, and Conservation of the Epithet *enterica* in *Salmonella enterica* over All Earlier Epithets that May Be Applied to This Species. Opinion 80." Int. J. Syst. Evol. Microbiol. 55 (2005): 519-520. PubMed: 15653929.
2. Tindall, B. J., et al. "Nomenclature and Taxonomy of the Genus *Salmonella*." Int. J. Syst. Evol. Microbiol. 55 (2005): 521-524. PubMed: 15653930.
3. Altekruze, S. F., M. L. Cohen, and D. L. Swerdlow. "Emerging Foodborne Diseases." Emerg. Infect. Dis. 3 (1997): 285-293. PubMed: 9284372.
4. Lavigne, J. P. and A. B. Blanc-Potard. "Molecular Evolution of *Salmonella enterica* Serovar Typhimurium and Pathogenic *Escherichia coli*: From Pathogenesis to Therapeutics." Infect. Genet. Evol. 8 (2008): 217-226. PubMed: 18226587.
5. Parsons, D. A. and F. Heffron. "*sciS*, an *icmF* Homolog in *Salmonella enterica* Serovar Typhimurium, Limits Intracellular Replication and Decreases Virulence." Infect. Immun. 73 (2005): 4338-4345. PubMed: 15972528.
6. Kumao, T., W. Ba-Thein and H. Hayashi. "Molecular Subtyping Methods for Detection of *Salmonella enterica* serovar Oranienburg Outbreaks." J. Clin. Microbiol. 40 (2002): 2057-2061. PubMed: 12037064.

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