Product Information Sheet for NR-514

Salmonella enterica subsp. *enterica*, Strain Ty2 (Serovar Typhi)

Catalog No. NR-514

(Derived from ATCC® 700931™)

For research use only. Not for human use.

Contributor:
ATCC®

Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Enterobacteriaceae, Salmonella*
Species: *Salmonella enterica*
Subspecies: *Salmonella enterica* subsp. *enterica*[1,2]
Serovar: Typhi
Strain: Ty2
Original Source: *Salmonella enterica* (*S. enterica*) subsp. *enterica* (formerly *Salmonella typhi*), strain Ty2 (serovar Typhi) was isolated in 1918 during a typhoid epidemic in Cherson, Russia.[3]
Comments: *S. enterica* subsp. *enterica*, strain Ty2 (serovar Typhi) was deposited at ATCC® by Guy Plunkett, III, Ph.D. The complete genome of the highly virulent Ty2 strain has been sequenced (GenBank: AE014613).[4]

S. enterica subsp. *enterica* are Gram-negative, rod-shaped, flagellated bacteria. The species is divided into six subspecies (I, II, IIIa, IIIb, IV, VI) where only subspecies I, subsp. *enterica*, is considered of clinical relevance. Salmonellosis (non-typhoidal), due to the greater than 1500 serovars of *S. enterica* subsp. *enterica*, is one of the most common food-borne diseases with an estimated two million cases that occur in the United States every year.[5] 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.[6,7]

S. enterica subsp. *enterica* serovar Typhi is a human-specific pathogen which causes typhoid fever[4,8], a severe infection of the reticuloendothelial system. Typhoid is difficult to treat with conventional drugs. Early administration of antibiotics has been highly effective in eliminating infections, but indiscriminate use of antibiotics has led to the emergence of multidrug-resistant strains.[4]

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-514 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 Luria Bertani (LB) 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 tube, slant and/or plate at 37°C for 24 hours.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Salmonella enterica* subsp. *enterica*, Strain Ty2 (Serovar Typhi), NR-514."

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, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

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3. Craigie, J. "Arthur Felix 1887-1956." Biogr. Mem. Fellows R. Soc. 3 (1957): 53-79.
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