

Product Information Sheet for NR-32835

***Vibrio parahaemolyticus*, Strain K4557 (Serotype O1:K33)**

Catalog No. NR-32835

For research use only. Not for human use.

Contributor:

U.S. Food and Drug Administration, Texas Department of Health, Alaska Department of Environmental Conservation and the New York State Department of Health

Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Vibrionaceae*, *Vibrio*

Species: *Vibrio parahaemolyticus*

Strain: K4557

Serotype: O1:K33¹

Original Source: *Vibrio parahaemolyticus* (*V. parahaemolyticus*), strain K4557 was isolated from the stool of a patient with clinical disease in Louisiana, USA, in 2006.¹

Comments: *V. parahaemolyticus*, strain K4557 was deposited as positive for *tlh* (species specific marker) and negative for *tdh* (thermostable direct hemolysin) and *trh* (*tdh*-related hemolysin) by qPCR analysis.¹

V. parahaemolyticus is a halophilic, Gram-negative motile, curved-rod shaped bacterium with a single polar flagellum. It is found in estuarine and coastal waters worldwide (Spain, Asia, Russia, South America, Africa and the United States). It is the leading cause of foodborne gastroenteritis. It is usually ingested in undercooked or raw seafood.²

V. parahaemolyticus is serotyped on the basis of somatic (O) and capsular (K) antigens, and is classified into at least 11 O-serogroups³ and over 70 K-serogroups. Certain serotypes, including O3:K6, O1:KUT, O4:K12 and O4:K68, have been reported to be more virulent^{2,3} and are considered to be the dominant serotypes responsible for infection.

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-32835 was packaged aseptically in 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 with 5% defibrinated sheep blood 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: *Vibrio parahaemolyticus*, Strain K4557 (Serotype O1:K33), NR-32835."

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:

1. A. DePaola, U.S. Food and Drug Administration, Division of Seafood Science and Technology, Gulf Coast Seafood Laboratories, Dauphin Island, Alabama Personal Communication
2. Jones, J. L., et al. "Biochemical, Serological, and Virulence Characterization of Clinical and Oyster *Vibrio parahaemolyticus* Isolates." *J. Clin. Microbiol.* 50 (2012): 2343-2352. PubMed: 22535979.
3. Chen, M. et al. "Development of O-Serogroup Specific PCR Assay for Detection and Identification of *Vibrio parahaemolyticus*." *Int. J. Food Microbiol.* 159 (2012): 122-129. PubMed: 23072697.

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