

Escherichia coli, Strain JJ1886

Catalog No. NR-51620

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: Enterobacteriaceae, Escherichia

Species: Escherichia coli

Strain: JJ1886 (also referred to as J4244¹)

Original Source: Escherichia coli (E. coli), strain JJ1886 was isolated in 2007 from a woman with fatal urosepsis in the United States.¹⁻³

Comments: E. coli, strain JJ1886 was deposited as sensitive to trimethoprim/sulfamethoxazole, doxycycline, meropenem, nitrofurantoin and polymyxin B and resistant to ciprofloxacin and levofloxacin.^{1,2} Strain JJ1886 belongs to the virulent, CTX-M-15-producing H30-Rx sublineage of E. coli sequence type 131 (ST131) and is reported to produce hemolysin and type 1 fimbriae.¹⁻³ The complete chromosome sequence of E. coli, strain JJ1886 and the sequences of its five plasmids, pJJ1886-1 through pJJ1886-5, are available (GenBank: [CP006784](#), [CP006785](#), [CP006786](#), [CP006787](#), [CP006788](#) and [CP006789](#), respectively).³

E. coli is a Gram-negative, rod-shaped bacterium commonly found in the gut flora of warm-blooded animals and is the primary facultative anaerobe of the human gastrointestinal tract. While most E. coli strains are harmless and are an important part of a healthy intestinal tract, some serotypes are pathogenic, causing diarrhea, urinary tract infections, respiratory illness, pneumonia or other illnesses in their host.⁴⁻⁶

Strain JJ1886 is reported to be virulent in a murine model of urinary tract infection.¹

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-51620 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 Nutrient broth or equivalent
Tryptic Soy agar or Tryptic Soy agar with 5% defibrinated sheep blood or Nutrient 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 1 day.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Escherichia coli, Strain JJ1886, NR-51620."

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. Johnson, J. R., Personal Communication.
2. Owens, R. C., Jr., et al. "Community Transmission in the United States of a CTX-M-15-Producing Sequence Type ST131 *Escherichia coli* Strain Resulting in Death." J. Clin. Microbiol. 49 (2011): 3406-3408. PubMed: 21752984.
3. Andersen, P. S., et al. "Complete Genome Sequence of the Epidemic and Highly Virulent CTX-M-15-Producing H30-Rx Subclone of *Escherichia coli* ST131." Genome Announc. 1 (2013): e00988-13. PubMed: 24309736.
4. Nataro, J. P. and J. B. Kaper. "Diarrheagenic *Escherichia coli*." Clin. Microbiol. Rev. 11 (1998): 142-201. PubMed: 9457432.
5. Kaper, J. B., J. P. Nataro and H. L. Mobley. "Pathogenic *Escherichia coli*." Nat. Rev. Microbiol. 2 (2004): 123-140. PubMed: 15040260.
6. Croxen, M. A., et al. "Recent Advances in Understanding Enteric Pathogenic *Escherichia coli*." Clin. Microbiol. Rev. 26 (2013): 822-880. PubMed: 24092857.

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