

***Rickettsia australis*, Strain JC**

Catalog No. NR-10454

For research use only. Not for human use.

NR-10454 is contaminated with *Mycoplasma gallisepticum*. Please determine whether or not this product is acceptable for your intended use.

Contributor:
ATCC®

Manufacturer:
BEI Resources

Product Description:

Bacteria Classification: *Rickettsiaceae*, *Rickettsia*

Species: *Rickettsia australis*

Strain: JC (also known as the Cutlac strain)

Original Source: *Rickettsia australis* (*R. australis*), strain JC was isolated in 1954 from a sixteen year old from Mount Tamborine, Queensland, Australia who was admitted to Brisbane Hospital suffering fever, headache and a rash several days after discovering a tick attached to his scalp.^{1,2} The JC strain is serologically related to the previously isolated PHS strain.³

Comment: *R. australis*, strain JC was deposited to the ATCC® by Dr. Gregory A. Dasch while at the Naval Medical Research Center, Bethesda, Maryland, U. S. A.

R. australis strains are Gram-negative, intracellular bacteria that belong to the alpha subdivision of *Proteobacteria*. They are members of the spotted fever group of Rickettsiales and are endemic to Australia. *R. australis* strains are the etiologic agents of Queensland tick typhus in humans and also have been isolated from the tick species *Ixodes holocyclus* and *I. tasmani*.⁴

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from African green monkey kidney cells (Vero; ATCC® CCL-81™) infected with *R. australis*, strain JC.

Packaging/Storage:

NR-10454 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:

Host: Vero cells (ATCC® CCL-81™)

Growth Medium: Eagle's Minimum Essential Medium supplemented with 10% fetal bovine serum, 2 mM L-glutamine and 1 mM sodium pyruvate

Infection: Cells should be 80 to 90% confluent (not 100% confluent)

Incubation: 5 to 14 days at 35°C and 5% CO₂

Cytopathic Effect: Cell rounding and some sloughing

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Rickettsia australis*, Strain JC, NR-10454."

Biosafety Level: 3

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.

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References:

1. Neilson, G. H., "A Case of Queensland Tick Typhus." Med. J. Aust. 42 (1955): 763-764. PubMed: 14393179.
2. Pope, J. H., "The Isolation of a Rickettsia Resembling *Rickettsia australis* in South East Queensland." Med. J. Aust. 42 (1955): 761-763. PubMed: 14393178.
3. Ludford, C. G. and I. Cook, "Serology of a Strain of *Rickettsia australis* isolated in South-East Queensland." Med. J. Aust. 44 (1957): 463-465. PubMed: 13430037.
4. Campbell, R. W. and R. Domrow, "Rickettsioses in Australia: Isolation of *Rickettsia tsutsugamushi* and *R. australis* from Naturally Infected Arthropods." Trans. R. Soc. Trop. Med. Hyg. 68 (1974): 397-402. PubMed: 4218386.

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