Rickettsia rickettsii, Strain Bitterroot

Catalog No. NR-393
(Derived from ATCC® VR-891™)

For research use only. Not for human use.

Contributor: ATCC®

Product Description:
Bacteria Classification: Rickettsiaceae, Rickettsia
Species: Rickettsia rickettsii
Strain: Bitterroot (R, VR-891)
Original Source: Rickettsia rickettsii (R. rickettsii), strain Bitterroot was isolated from Dermacentor andersoni ticks collected in Bitterroot Valley, Montana, 1945.1

Comments: R. rickettsii, strain Bitterroot was deposited to the ATCC® from the collection of Dr. F. Marilyn Bozeman.

R. rickettsia is a member of the spotted fever group of Rickettsiaceae and the etiologic agent of Rocky Mountain spotted fever (RMSF). R. rickettsia is an intracellular Gram-negative pathogen that is transmitted to a human host via interaction with an infected tick (commonly Dermacentor variabilis and Dermacentor andersoni in the USA). The tick acts as both a natural reservoir and a vector for disease transmission. The disease is characterized by a spotted rash and has a high mortality rate if it is not treated. RMSF responds well to treatment with doxycycline if diagnosis is not delayed.2

R. rickettsii, strain Bitterroot is an R-type isolate. R-type isolates are the most pathogenic and cause severe infection accompanied by long-lasting fever and scrotal reactions in guinea pigs. Additionally these isolates caused mortality in 30% of infected animals.3

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. rickettsii, strain Bitterroot.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
NR-393 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: Minimum Essential Medium with Earle’s salts supplemented with 10% irradiated fetal bovine serum, 2 mM L-glutamine and 1 mM sodium pyruvate
Infection: Cells should be 80 to 90% confluent (not 100% confluent)
Incubation: 4 to 10 days at 34°C and 5% CO2
Cytopathic Effect: Cell rounding and sloughing

Citation:
Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Rickettsia rickettsii, Strain Bitterroot, NR-393."

Biosafety Level: 3

Disclaimers:
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References:

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