**Rickettsia rickettsii**, Strain Lost Horse Canyon

**Catalog No. NR-327**

For research use only. Not for human use.

**Contributor:** ATCC®

**Product Description:**

**Bacteria Classification:** Rickettsiaceae, Rickettsia  
**Species:** Rickettsia rickettsii  
**Strain:** Lost Horse Canyon (VR-3042)  
**Original Source:** Rickettsia rickettsii (R. rickettsii), strain Lost Horse Canyon was a yolk sac isolate from a Dermacentor andersoni tick in Lost Horse Canyon, Bitterroot Valley, Montana, 1958.  
**Comments:** R. rickettsii, strain Lost Horse Canyon was deposited to the ATCC® from the collection of Dr. F. Marilyn Bozeman.

R. rickettsii is a member of the spotted fever group of Rickettsiaceae and the etiologic agent of Rocky Mountain spotted fever (RMSF). R. rickettsii 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.

R. rickettsii, strain Lost Horse Canyon 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.

**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 Lost Horse Canyon.

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

**Packaging/Storage:**

NR-327 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:** 6 to 18 days at 35°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 Lost Horse Canyon, NR-327.”

**Biosafety Level:** 3


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References:

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