Product Information Sheet for NR-10402

Rickettsia parkeri, Strain Maculatum C

Catalog No. NR-10402

For research use only. Not for human use.

Contributor:
ATCC®

Product Description:
Bacteria Classification: *Rickettsiaceae*, *Rickettsia*
Species: *Rickettsia parkeri*
Strain: Maculatum C (MacC)
Original Source: *Rickettsia parkeri* (*R. parkeri*), strain Maculatum C is probably a Gulf Coast tick (*Amblyomma maculatum*) isolate.[1]
Comment: *R. parkeri*, strain Maculatum C was deposited to the ATCC® by Dr. Gregory A. Dasch while at the Naval Medical Research Center, Bethesda, Maryland, U. S. A.

R. parkeri is a member of the spotted fever group of Rickettsiae and is the causative agent of Maculatum disease in guinea pigs.[1] *R. parkeri* is an intracellular Gram-negative pathogen that is now known to be transmitted to a human host[2,3] via interaction with an infected tick (commonly *Amblyomma maculatum*, but recently *R. parkeri* has been discovered in other species of *Amblyomma*).[4] The tick acts as both a natural reservoir and a vector for disease transmission. The human disease is similar but less severe than the typically described Rocky Mountain spotted fever (caused by *R. rickettsii*) and responds well to treatment with doxycycline.[5]

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. parkeri*, strain Maculatum C.

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

Packaging/Storage:
NR-10402 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 20 days at 35°C and 5% CO_2
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 parkeri*, Strain Maculatum C, NR-10402."

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/bmbl5/bmbl5toc.htm.

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References:

1. Lackman, D. B., R. R. Parker and R. K. Gerloff. "Serological Characteristics of a Pathogenic Rickettsia Occurring in *Amblyomma maculatum*." Public Health Rep. 64 (1949): 1342-1349. PubMed: 15398100.
2. Paddock, C. D., et al. "*Rickettsia parkeri*: A Newly Recognized Cause of Spotted Fever Rickettsiosis in the United States." Clin. Infect. Dis. 38 (2004): 805-811. PubMed: 14999622.
3. Whitman, T. J., et al. "*Rickettsia parkeri* Infection after Tick Bite, Virginia." Emerg. Infect. Dis. 13 (2007): 334-336. PubMed: 17479907.
4. Sumner, J. W., et al. "Gulf Coast Ticks (*Amblyomma maculatum*) and *Rickettsia parkeri*, United States." Emerg. Infect. Dis. 13 (2007): 751-753. PubMed: 17553257.
5. Paddock, C. D., et al. "*Rickettsia parkeri* Rickettsiosis and Its Clinical Distinction from Rocky Mountain Spotted Fever." Clin. Infect. Dis. 47 (2008): 1188-1196. PubMed: 18808353.
6. Paddock, C. D. "*Rickettsia parkeri* as a Paradigm for Multiple Causes of Tick-Borne Spotted Fever in the Western Hemisphere." Ann. N. Y. Acad. Sci. 1063 (2005): 315-326. PubMed: 16481534.

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