Product Information Sheet for NR-19221

Orientia chuto, Strain Dubai

Catalog No. NR-19221

(Derived from ATCC® VR-1744™)

For research use only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Rickettsiaceae*, *Rickettsiae, Orientia*
Species: *Orientia chuto*
Strain: Dubai
Original Source: *Orientia chuto* (*O. chuto*) (formerly known as *Rickettsia tsutsugamushi* and *Orientia tsutsugamushi*), strain Dubai was isolated in 2006 from a 52 year old female from Australia who was returning from Dubai, United Arab Emirates (UAE) and developed acute scrub typhus with symptoms including fever, myalgia, headache, rash, and eschar.[1]
Comment: This strain of *O. chuto* was originally deposited to ATCC® as "Churchill" but the strain designation was changed to "Dubai" prior to publication.

O. chuto is a Gram-negative, obligate intracellular pathogen of eukaryotic cells and belongs to the alpha subdivision of *Proteobacteria*. It is a member of the family Rickettsiaceae. *O. chuto* is the causative agent of scrub typhus in humans.[1]

Material Provided:

Each vial contains approximately 1 mL of *Mus musculus* connective tissue fibroblast cells (NCTC Clone 929 [L-cell, L-929, derivative of strain L]; ATCC® CCL-1™) infected with *O. chuto*, strain Dubai, suspended in 70% Eagle's Minimum Essential Medium, 20% horse serum, and 10% DMSO.

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

Packaging/Storage:

NR-19221 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: *Mus musculus* connective tissue fibroblast cells (NCTC Clone 929 [L-cell, L-929, derivative of strain L]; (ATCC® CCL-1™)
Growth Medium: Eagle's Minimum Essential Medium with Earle's salts, non-essential amino acids, L-glutamine and sodium pyruvate, supplemented with 2% horse serum
Infection: Cells should be 60% to 80% confluent; the organism should be adsorbed to the monolayer by centrifugation at 800 × g for approximately 1 hour
Incubation: 14 to 15 days at 37°C and 5% CO_2
Cytopathic Effect: Toxicity or cell rounding may be observed. It is recommended that replication be confirmed by a PCR-based assay.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Orientia chuto,* Strain Dubai, NR-19221."

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, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Izzard, L., et al. "Isolation of a Novel *Orientia* Species (*O. chuto* sp. nov.) from a Patient Infected in Dubai." J. Clin. Microbiol. 48 (2010): 4404-4409. PubMed: 20926708

Support Provided by NIAID

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