

## ***Rickettsia africae*, Strain Eth MA24**

**Catalog No. NR-10399**

**For research use only. Not for human use.**

**Contributor:**  
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### **Product Description:**

Bacteria Classification: *Rickettsiaceae*, *Rickettsia*

Species: *Rickettsia africae*

Strain: Eth MA24

Original Source: *Rickettsia africae* (*R. africae*), strain Eth MA24 was isolated from the hard-bodied, tropical bont tick, *Amblyomma variegatum*.

Comment: *R. africae*, strain Eth MA24 was deposited to the ATCC® by Dr. Gregory A. Dasch while at the Naval Medical Research Center, Bethesda, Maryland, U. S. A. The complete genome of strain, ESF-5, of *R. africae* was recently sequenced (Gen Bank: CP001612 and CP001613).<sup>1</sup>

*R. africae* is a member of the spotted fever group of Rickettsiae and is the causative agent of African tick bite fever in humans.<sup>2</sup> *R. africae* is an intracellular Gram-negative pathogen that is transmitted to a host via interaction with an infected tick (commonly *Amblyomma variegatum* or *Amblyomma hebraeum*) primarily in rural sub-Saharan Africa. The tick acts as both a natural reservoir and a vector for disease transmission. African tick bite fever is much less severe (the infection is never lethal) than the typically described Rocky Mountain spotted fever (caused by *R. rickettsii*) and responds well to treatment with doxycycline.<sup>1,3</sup>

### **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. africae*, strain Eth MA24.

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

### **Packaging/Storage:**

NR-10399 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<sub>2</sub>

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 africae*, Strain Eth MA24, NR-10399."

### **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](http://www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm).

### **Disclaimers:**

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### References:

1. Fournier, P. E., et al. "Analysis of the *Rickettsia africae* Genome Reveals that Virulence Acquisition in *Rickettsia* Species May Be Explained by Genome Reduction." BMC Genomics 10 (2009): 166. PubMed: 19379498.
2. Kelly, P. J., et al. "*Rickettsia africae* sp. nov., the Etiological Agent of African Tick Bite Fever." Int. J. Syst. Bacteriol. 46 (1996): 611-614. PubMed: 8934912.
3. Jensenius, M., et al. "African Tick Bite Fever." Lancet Infect. Dis. 3 (2003): 557-564. PubMed: 12954562.
4. Raoult, D., et al. "*Rickettsia africae*, a Tick-Borne Pathogen in Travelers to Sub-Saharan Africa." N. Engl. J. Med. 344 (2001): 1504-1510. PubMed: 11357153.

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