

## ***Histoplasma capsulatum*, Strain WU24**

### **Catalog No. NR-48970**

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

#### **Contributor and Manufacturer:**

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#### **Product Description:**

Classification: *Ajellomycetaceae*, *Histoplasma*

Species: *Histoplasma capsulatum* (also referred to as *Ajellomyces capsulatus* and *Emmonsella capsulata*)

Strain: WU24

Original Source: *Histoplasma capsulatum* (*H. capsulatum*), strain WU24 was isolated in 2003 from a patient with a history of HIV infection in Missouri, USA.<sup>1</sup>

Comment: *H. capsulatum*, strain WU24 was deposited as belonging to North American group 1 (NA1), as a chemotype II strain and as requiring cell wall  $\alpha$ -(1,3)-glucan for successful *in vitro* infection of macrophages.<sup>2</sup>

*Histoplasma capsulatum* is a thermally dimorphic environmental fungus that inhabits soil. It is endemic in the United States (in the Ohio and Mississippi river valleys) and in Central America. In the soil and at 25°C to 30°C *in vitro*, it exists as mycelium, especially in areas with large amounts of bat or bird guano. In humans and at 37°C *in vitro*, it is a parasitic yeast.<sup>3</sup> In immunocompetent people, it can present as a mild and self-limiting infection, but is usually asymptomatic. In immunocompromised patients, it can cause severe and disseminated disease. It is considered to be an AIDS-defining illness.<sup>3</sup>

#### **Material Provided:**

Each vial of NR-48970 contains approximately 0.7 mL of fungal growth suspended in 20% glycerol.

#### **Packaging/Storage:**

NR-48970 was packaged aseptically in cryovials and is provided frozen on dry ice. The product should be stored at -80°C or colder.

#### **Growth Conditions:**

##### Media:

Modified Sabouraud Dextrose broth or Modified Histoplasma Macrophage Media (HMM) broth or Brain Heart Infusion broth or equivalent

Potato Dextrose agar, Yeast Mold agar (modified with 80 mg/mL uridine) or equivalent

##### Incubation:

Temperature: 37°C

Atmosphere: Aerobic

##### Propagation:

1. Keep vial frozen until ready for use; thaw rapidly.

2. Inoculate an agar plate with approximately 50  $\mu$ L of thawed culture and/or transfer the entire thawed aliquot into a single tube of broth
3. Incubate the plate and/or tube at 37°C for 4 to 6 weeks.

#### **Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Histoplasma capsulatum*, Strain WU24, NR-48970."

#### **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](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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#### **References:**

1. Goldman, W. E., Personal Communication.
2. Sepúlveda, V. E., C. L. Williams and W. E. Goldman. "Comparison of Phylogenetically Distinct *Histoplasma*

- Strains Reveals Evolutionarily Divergent Virulence Strategies." mBio 5 (2014): e01376-14. PubMed: 24987093.
3. Kauffman, C. A. "Histoplasmosis: A Clinical and Laboratory Update." Clin. Microbiol. Rev. (2007): 115-132. PubMed: 17223624.

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