Product Information Sheet for NR-48767

Cryptococcus neoformans, Strain H99O

Catalog No. NR-48767

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Manufacturer:
BEI Resources

Product Description:
Classification: *Filobasidiaceae, Cryptococcus*
Species: *Cryptococcus neoformans*
Strain: H99O (also referred to as H99)
Mating Type: α
Original Source: *Cryptococcus neoformans (C. neoformans),* strain H99 was isolated from the cerebrospinal fluid of a human male who had been treated for Hodgkin's disease in North Carolina, USA on February 14, 1978.[1] After an unknown number of passages, strain H99 was reported to lose virulence and was subsequently passaged through the rabbit model of infection to increase its virulence. It was renamed as H99O and frozen in 1994.[1]
Comments: *C. neoformans* var. *grubii,* strain H99O (H99) was sequenced in 2014 through a collaboration between Duke University and the Broad Institute[2] (NCBI BioProject: PRJNA411). Strain H99O is the progenitor of nine phenotypic variants that display either increased or decreased mating ability, melanization and virulence.[1]

BEI Resources Number	Strain Name	Mating ability/ Melanization/ Virulence
NR-48767	**H99O**	N/A
NR-48768	KN99a	Increased
NR-48769	KN99α	Increased
NR-48770	H99F	Increased
NR-48771	H99C	Decreased
NR-48772	H99S	Increased
NR-48773	H99W	Decreased
NR-48774	H99ED	Decreased
NR-48775	H99E	Decreased
NR-48776	YL99a	Increased
NR-48777	YL99α	Increased

There are currently two species, *C. neoformans* and *C. gattii* in the Cryptococcus species complex. These species are best recognized as the agents of cryptococcosis, an AIDS-defining illness. *C. neoformans* has been widely associated with avian excreta.[2] *C. neoformans* is divided into two varieties, *C. neoformans* var. *grubii* (serotype A) and *C. neoformans* var *neoformans* (serotype D).[3] In the current classification scheme, there are five distinct lineages recognized, named VNI, VNII, VNB, VNIII and VNIV.[3] The two varieties (*neoformans* and *grubii*) are able to recombine and produce diploid or aneuploid intervarietal AD hybrids.[3]

Material Provided:
Each vial contains approximately 0.5 mL of *C. neoformans* in 20% glycerol.

Packaging/Storage:
NR-48767 was packaged aseptically in cryovials and is provided frozen on dry ice. The product should be stored at cryogenic temperature (-130°C or colder), preferably in the vapor phase of a liquid nitrogen freezer. If liquid nitrogen storage facilities are not available, frozen cryovials may be stored at -70°C or colder for approximately one week.

Growth Conditions:
Media:
Yeast Mold broth or equivalent
Yeast Mold agar or equivalent
Incubation:
Temperature: 25°C to 30°C
Atmosphere: Aerobic
Propagation:
1. Keep vial frozen until ready for use; thaw rapidly in a waterbath at 25°C to 30°C. Typically, this takes less than 5 minutes.
2. Immediately after thawing, inoculate an agar plate with approximately 40 µL of thawed culture and/or transfer the entire thawed aliquot into a single tube of broth.
3. Incubate the plate and/or tube at 25°C to 30°C for 2 to 4 days.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Cryptococcus neoformans*, Strain H99O, NR-48767."

Biosafety Level: 2
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. Janbon, et al. "Analysis of the Genome and Transcriptome of *Cryptococcus neoformans* var. *grubii* Reveals Complex RNA Expression and Microevolution Leading to Virulence Attenuation." PLoS Genet. 10 (2014): e1004261. PubMed: 24743168.
2. Heitman, J., Personal Communication.
3. Cogliati, M. "Global Molecular Epidemiology of *Cryptococcus neoformans* and *Cryptococcus gattii*: An Atlas of the Molecular Types." Scientifica 2013; 2013.675213. PubMed: 24278784.

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