

Cryptococcus gattii, Strain Alg99

Catalog No. NR-43213

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Contributor and Manufacturer:

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Product Description:

Classification: *Filobasidiaceae, Cryptococcus*

Species: *Cryptococcus gattii*

Strain: Alg99

Original Source: *Cryptococcus gattii* (*C. gattii*), strain Alg99 is the progeny of a genotypic cross between *C. gattii* strains R265 and Alg81.^{1,2}

Comment: *C. gattii*, strain Alg99 is progeny produced towards the generation of a congenic pair.^{1,2} It was deposited as expressing a wild type genotype, mating type a. The parental strains, intermediate progeny, final congenic pair and various mutants are available through BEI Resources [NR-43208 through NR-43225, Table 1 (below)].

The *Cryptococcus* species complex is comprised of four distinct lineages, VGI to VGIV, which are currently classified as two species, *C. neoformans* and *C. gattii*. These species are best recognized as the agents of cryptococcosis, an AIDS-defining illness.^{2,3}

C. gattii are characterized serologically as serotypes B and C, and clinical isolates are relatively rare.³ Although cryptococcosis was historically considered to be a tropical and subtropical illness, in the late 1990's, cryptococcal disease in healthy people, domestic pets and wildlife caused by *C. gattii* appeared on Vancouver Island, British Columbia and it subsequently spread to the mainland and into the northwest United States.^{2,4} The origin of this outbreak is unknown, though *C. gattii* strain R265 is known to be the causative agent.⁴

Table 1: *C. gattii* Strains

| Parental Strains | BEI Resources | Progeny | BEI Resources |
|------------------|---------------|--------------|-----------------|
| R265 | NR-43208 | Alg40 | NR-43210 |
| CBS1930 | NR-43209 | | |
| R265 | NR-43208 | Alg75 | NR-43211 |
| Alg40 | NR-43210 | | |
| R265 | NR-43208 | Alg81 | NR-43212 |
| Alg75 | NR-43211 | | |
| R265 | NR-43208 | Alg99 | NR-43213 |
| Alg81 | NR-43212 | | |
| R265 | NR-43208 | Alg114 | NR-43214 |
| Alg99 | NR-43213 | | |

| Parental Strains | BEI Resources | Progeny | BEI Resources |
|------------------|---------------|-----------|---------------|
| R265 | NR-43208 | Alg115 | NR-43215 |
| Alg114 | NR-43214 | | |
| R265 | NR-43208 | Alg127 | NR-43216 |
| Alg115 | NR-43215 | | |
| R265 | NR-43208 | Alg144 | NR-43217 |
| Alg127 | NR-43216 | | |
| R265 | NR-43208 | Alg159 | NR-43218 |
| Alg144 | NR-43217 | | |
| R265 | NR-43208 | Alg166 | NR-43219 |
| Alg159 | NR-43218 | | |
| R265 | NR-43208 | AIR265a | NR-43220 |
| Alg166 | NR-43219 | | |
| R265 | NR-43208 | AIR265α | NR-43221 |
| Alg166 | NR-43219 | | |
| R265 | Mutant | Alg254 | NR-43222 |
| Alg254 | Mutant | Alg268 | NR-43223 |
| R265 | Mutant | AlgFUR1-1 | NR-43224 |
| AIR265a | NR-43220 | Alg520 | NR-43225 |
| AlgFUR1-1 | NR-43224 | | |

Material Provided:

Each vial of NR-43213 contains approximately 1 mL of yeast culture in Yeast Extract Peptone Dextrose broth containing 15% glycerol.

Packaging/Storage:

NR-43213 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:

Yeast Extract Peptone Dextrose broth or equivalent
Yeast Extract Peptone Dextrose agar, Yeast Mold agar or equivalent

Incubation:

Temperature: 30°C
Atmosphere: Aerobic

Propagation:

1. Keep vial frozen until ready for use; thaw rapidly.
2. Inoculate an agar plate with approximately 50 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 30°C for 2 to 4 days.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Cryptococcus gattii*, Strain Alg99, NR-43213."

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. Idnurm, A., Personal Communication.
2. Zhu, P., et al. "Congenic Strains for Genetic Analysis of Virulence Traits in *Cryptococcus gattii*." Infect. Immun. 81 (2013): 2616-2625. PubMed: 23670558.
3. Diaz, M. R. and J. W. Fell. "Use of a Suspension Array for Rapid Identification of the Varieties and Genotypes of *Cryptococcus neoformans* Species Complex." J. Clin. Microbiol. 43 (2005): 3662-3672. PubMed: 16081894.

4. Kidd, S. E., et al. "A Rare Genotype of *Cryptococcus gattii* caused the Cryptococcosis Outbreak on Vancouver Island (British Columbia, Canada)." Proc. Natl. Acad. Sci. USA 101 (2004): 17258-17263. PubMed: 15572442.

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