

Cryptococcus gattii, Strain Alg268

Catalog No. NR-43223

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Contributor and Manufacturer:

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Product Description:

Classification: *Filobasidiaceae, Cryptococcus*

Species: *Cryptococcus gattii*

Strain: Alg268

Original Source: *Cryptococcus gattii* (*C. gattii*), strain Alg268 is a complementation mutant of strain Alg254 (the basidiomycete white collar 2 (BWC2) gene was replaced with a nourseothricin cassette). The wild type BWC2 gene was amplified and inserted into a plasmid, which was transformed into *Agrobacterium tumefaciens*, and transconjugated into *C. gattii*, strain Alg254.^{1,2}

Comment: *C. gattii*, strain Alg268 was deposited as expressing BWC2, mating type α and resistant to G418 and cefotaxime.^{1,2} The parental, intermediate progeny, congenic pair and various mutant strains 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		

Parental Strains	BEI Resources	Progeny	BEI Resources
R265	NR-43208	Alg99	NR-43213
Alg81	NR-43212		
R265	NR-43208	Alg114	NR-43214
Alg99	NR-43213		
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	AIR265 α	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-43223 contains approximately 1 mL of yeast culture in Yeast Extract Peptone Dextrose broth containing 15% glycerol.

Packaging/Storage:

NR-43223 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 μ 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 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 Alg268, NR-43223.”

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. Idnum, 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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