

**Cryptococcus gattii, Strain Alg268**

**Catalog No. NR-50199**

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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.<sup>1,2</sup>

Comment: *C. gattii*, strain Alg268 was deposited as expressing BWC2, mating type  $\alpha$  and resistant to G418 and cefotaxime.<sup>1,2</sup> The parental strains, intermediate progeny, final congenic pair and various mutants are available through BEI Resources [NR-50184 through NR-50201, Table 1 (below)].

The *Cryptococcus* species complex is comprised of four distinct lineages, VG1 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.<sup>2,3</sup>

*C. gattii* are characterized serologically as serotypes B and C, and clinical isolates are relatively rare.<sup>3</sup> 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.<sup>2,4</sup> The origin of this outbreak is unknown, though *C. gattii* strain R265 is known to be the causative agent.<sup>4</sup>

**Table 1: *C. gattii* Strains**

Parental Strains	BEI Resources	Progeny	BEI Resources
R265	NR-50184	Alg40	NR-50186
CBS1930	NR-50185		
R265	NR-50184	Alg75	NR-50187
Alg40	NR-50186		
R265	NR-50184	Alg81	NR-50188
Alg75	NR-50187		

Parental Strains	BEI Resources	Progeny	BEI Resources
R265	NR-50184	Alg99	NR-50189
Alg81	NR-50188		
R265	NR-50184	Alg114	NR-50190
Alg99	NR-50189		
R265	NR-50184	Alg115	NR-50191
Alg114	NR-50190		
R265	NR-50184	Alg127	NR-50192
Alg115	NR-50191		
R265	NR-50184	Alg144	NR-50193
Alg127	NR-50192		
R265	NR-50184	Alg159	NR-50194
Alg144	NR-50193		
R265	NR-50184	Alg166	NR-50195
Alg159	NR-50194		
R265	NR-50184	AIR265a	NR-50196
Alg166	NR-50195		
R265	NR-50184	AIR265 $\alpha$	NR-50197
Alg166	NR-50195		
R265	Mutant	Alg254	NR-50198
Alg254	Mutant	<b>Alg268</b>	<b>NR-50199</b>
R265	Mutant	AlgFUR1-1	NR-50200
AIR265a	NR-50196	Aig250	NR-50201
AlgFUR1-1	NR-50200		

**Material Provided:**

Each vial of NR-50199 contains approximately 0.5 mL of yeast culture in 20% glycerol.

**Packaging/Storage:**

NR-50199 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 equivalent

Modified Sabouraud Dextrose agar, Yeast Mold agar or equivalent

Incubation:

Temperature: 25°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 25°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-50199.”

**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](http://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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