

***Cryptococcus gattii*, Strain Alg40**

**Catalog No. NR-50186**

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

**Contributor and Manufacturer:**

Alexander Idnurm, Associate Professor, School of Biological Sciences, The University of Missouri-Kansas City, Kansas City, Missouri, USA

**Product Description:**

Classification: *Filobasidiaceae*, *Cryptococcus*

Species: *Cryptococcus gattii*

Strain: Alg40

Original Source: *Cryptococcus gattii* (*C. gattii*), strain Alg40 is the progeny of a genotypic cross between *C. gattii* strains R265 and CBS1930.<sup>1,2</sup>

Comment: *C. gattii*, strain Alg40 is progeny produced towards the generation of a congenic pair.<sup>1,2</sup> 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-50184, and NR-50186 through NR-50201, 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.<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	<b>Alg40</b>	<b>NR-50186</b>
CBS1930	NR-50185		
R265	NR-50184	Alg75	NR-50187
Alg40	NR-50186		
R265	NR-50184	Alg81	NR-50188
Alg75	NR-50187		
R265	NR-50184	Alg99	NR-50189
Alg81	NR-50188		
R265	NR-50184	Alg114	NR-50190
Alg99	NR-50189		

Parental Strains	BEI Resources	Progeny	BEI Resources
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	AIR265α	NR-50197
Alg166	NR-50195		
R265	Mutant	Alg254	NR-50198
Alg254	Mutant	Alg268	NR-50199
R265	Mutant	AlgFUR1-1	NR-50200
AIR265α	NR-50191	Alg250	NR-50201
AlgFUR1-1	NR-50200		

**Material Provided:**

Each vial of NR-50186 contains approximately 0.5 mL of yeast culture in 20% glycerol.

**Packaging/Storage:**

NR-50186 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 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 for 2 to 4 days.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Cryptococcus gattii*, Strain Alg40, NR-50186."

**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).

**Disclaimers:**

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at [www.beiresources.org](http://www.beiresources.org).

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

**Use Restrictions:**

**This material is distributed for internal research, non-commercial purposes only.** This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

**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.

ATCC® is a trademark of the American Type Culture Collection.

