

***Candida glabrata*, Strain DSY565**

Catalog No. NR-51686

For research use only. Not for human use.

Contributor:

Dominique Sanglard, Professor, Institute of Microbiology, University Hospital of Lausanne, Lausanne, Switzerland

Manufacturer:

BEI Resources

Product Description:

Classification: Mitosporic *Saccharomycetales*, *Candida*

Species: *Candida glabrata*

Strain: DSY565

Original Source: *Candida glabrata* (*C. glabrata*), strain DSY565 was isolated in 1995 from a patient with acquired immunodeficiency syndrome and oropharyngeal candidiasis following two courses of treatment with fluconazole.^{1,2}

Comments: Strain DSY565 was deposited as a fluconazole-resistant strain.¹ A fluconazole-susceptible isolate from the same patient collected before fluconazole treatment is available as BEI Resources NR-51685. The complete genome of *C. glabrata*, strain DSY562 has been sequenced (GenBank: [MV0E00000000](#)).²

C. glabrata are ubiquitous in the environment and commensal inhabitants of the oral cavity, gastrointestinal tract and skin of most healthy humans.^{3,4} For the immunocompromised, however, *C. glabrata* is the second most commonly recovered pathogenic yeast in the United States behind *C. albicans*. Together, the two species are responsible for approximately 70% of all cases of systemic candidiasis with increasing rates of multidrug resistance, particularly to azoles.^{1,2,3,4} *C. glabrata* is more closely related phylogenetically to *Saccharomyces cerevisiae* than *C. albicans*, and is a member of the *Nakaseomyces* clade. Unlike other *Candida*, *C. glabrata* has a haploid genome, and therefore only reproduces asexually, forming blastoconidia. In addition, *C. glabrata* has differentiating features such as absence of pseudohyphae, facultative anaerobic growth and rapidly decreasing susceptibility to azole antifungals.^{4,5,6}

Material Provided:

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

Packaging/Storage:

NR-51686 was packaged aseptically in cryovials and is provided frozen on dry ice. The product should be stored at -70°C or colder. For long term storage the product should be stored -130°C or colder, preferably in the vapor phase of a liquid nitrogen freezer.

Growth Conditions:

Media:

Yeast Mold broth or equivalent

Yeast Mold agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic

Propagation:

1. Keep vial frozen until ready for use; thaw rapidly in a water bath at 25°C to 30°C. Typically, this takes less than 5 minutes.
2. Transfer the entire contents of the vial into Yeast Mold broth.
3. Incubate at 37°C for 2 to 6 days.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Candida glabrata*, Strain DSY565, NR-51686."

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. Sanglard, D., et al. "The ATP Binding Cassette Transporter Gene *CgCDR1* from *Candida glabrata* is Involved in the Resistance of Clinical Isolates to Azole Antifungal Agents." *Antimicrob. Agents Chemother.* 43 (1999): 2753-2765. PubMed: 10543759.
2. Vale-Silva, L., et al. "Comparative Genomics of Two Sequential *Candida glabrata* Clinical Isolates." *G3 (Bethesda)* 7 (2017): 2413-2426. PubMed: 28663342.
3. Brunke, S. and B. Hube. "Two Unlike Cousins: *Candida albicans* and *C. glabrata* Infection Strategies." *Cell. Microbiol.* 15 (2013): 701-708. PubMed: 23253282.
4. Hendrickson, J. A., et al. "Antifungal Resistance: A Concerning Trend for the Present and Future." *Curr. Infect. Dis. Rep.* 21 (2019): 47. PubMed: 31734730.
5. Bolotin-Fukuhara, M. and C. Fairhead. "*Candida glabrata*: A Deadly Companion?" *Yeast* 8 (2014): 279-288. PubMed: 24861573.
6. Glockner, A. and O. A. Cornely. "*Candida glabrata* -- Unique Features and Challenges in the Clinical Management of Invasive Infections." *Mycoses* 58 (2015): 445-450. PubMed: 26207423.

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