Product Information Sheet for NR-51686

Candida glabrata, Strain DSY565

Catalog No. NR-51686

For research use only. Not for use in humans.

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Manufacturer:
BEI Resources

Product Description:
Classification: Mitosporic *Saccharomycetales, Candida*
Species: *Candida glabrata* (also referred to as *Nakaseomyces glabrata* and *Nakaseomyces glabratus*)[1,2,3]
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.[4,5]
Comments: Strain DSY565 was deposited as a fluconazole-resistant strain.[2] 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 DSY565 has been sequenced (GenBank: MVOE00000000).

C. glabrata are ubiquitous in the environment and commensal inhabitants of the oral cavity, gastrointestinal tract and skin of most healthy humans.[6,7] 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.[4,5,6,7] *C. glabrata* is more closely related phylogenetically to *Saccharomyces cerevisae* 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.[7,8,9]

Reclassification of *C. glabrata* to *Nakaseomyces glabratus* has been proposed following a phylogenomic analysis of the genus *Candida*, and is currently under debate.[1,2,3]

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 -60°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 Emmons Modified Sabouraud broth or equivalent
Yeast Mold agar or Emmons Modified Sabouraud agar or equivalent
Incubation:
Temperature: 25°C to 30°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. Immediately after thawing, 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 to 30°C for 2 to 4 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 (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

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References:

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5. Vale-Silva, L., et al. "Comparative Genomics of Two Sequential *Candida glabrata* Clinical Isolates." G3 (Bethesda) 7 (2017): 2413-2426. PubMed: 28663342.
6. Brunke, S. and B. Hube. "Two Unlike Cousins: *Candida albicans* and *C. glabrata* Infection Strategies." Cell. Microbiol. 15 (2013): 701-708. PubMed: 23253282.
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