Product Information Sheet for HM-1123

Candida glabrata, Strain CAB52-4041

Catalog No. HM-1123

For research use only. Not for use in humans.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Classification: *Saccharomycetaceae*, *Candida*
Species: *Candida glabrata*
Strain: CAB52-4041
Original Source: *Candida glabrata (C. glabrata)*, strain CAB52-4041 was isolated in 2012 from human bronchial washings in St. Louis, Missouri, USA.[1,2]
Comments: *C. glabrata*, strain CAB52-4041 (HMP ID 9326) is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora.
Note: HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

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.[3,4,5,6] *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.[4,7,8]

Material Provided:
Each vial contains approximately 0.5 mL of yeast cells in 20% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
HM-1123 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Media:
Emmons Modified Sabouraud broth or equivalent
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 as part of the Human Microbiome Project: *Candida glabrata*, Strain CAB52-4041, HM-1123."

Biosafety Level: 1
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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see 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.

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References:

1. Burnham, C.-A. D., Personal Communication.
2. HMP ID 9326 (*C. glabrata*, strain CAB52-4041)
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. 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.
6. Vale-Silva, L., et al. "Comparative Genomics of Two Sequential *Candida glabrata* Clinical Isolates." G3 (Bethesda) 7 (2017): 2413-2426. PubMed: 28663342.
7. Bolotin-Fukuhara, M. and C. Fairhead. "*Candida glabrata*: A Deadly Companion?" Yeast 8 (2014): 279-288. PubMed: 24861573.
8. 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.