

***Candida krusei*, Strain CAB39-6420**

Catalog No. HM-1122

For research use only. Not for use in humans.

Contributor:

Carey-Ann D. Burnham, Assistant Professor, Department of Pathology and Immunology, Washington University School of Medicine, St. Louis, Missouri, USA

Manufacturer:

BEI Resources

Product Description:

Classification: *Saccharomycetaceae, Candida*

Species: *Candida krusei* (also referred to as *Pichia kudriavzevii*, *Issatchenkia orientalis* and *Candida glycerinogenes*)¹

Strain/Isolate: CAB39-6420

Original Source: *Candida krusei* (*C. krusei*), strain CAB39-6420 was isolated in February 2012 from human blood in St. Louis, Missouri, USA.^{2,3}

Comments: *C. krusei*, strain CAB39-6420 ([HMP ID 1558](#); as *Pichia kudriavzevii*) 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.

Five species of *Candida* make up greater than 90 percent of candidemia cases, *Candida albicans*, *C. parapsilosis*, *C. krusei*, *C. glabrata* and *C. tropicalis*.⁴ The non-*Candida albicans* *Candida* (NCAC) species are becoming increasingly common nosocomial infections, with frequency of the different NCAC varying greatly by geographic location. *C. krusei* is intrinsically resistant to fluconazole and is often isolated in hematology/oncology patients.⁵ Fluconazole resistance in *C. krusei* is thought to be caused by an unusually low affinity to fluconazole by its ergosterol synthesis enzyme Erg11 and constitutively expressed drug efflux pumps Abc1 and Abc2.¹

Material Provided:

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

Packaging/Storage:

HM-1122 was packaged aseptically in cryovials. The product 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:

Sabouraud Dextrose broth or Yeast Mold broth or equivalent
Sabouraud Dextrose agar or Yeast Mold 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 waterbath 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 krusei*, Strain CAB39-6420, HM-1122."

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 \(BMBL\)](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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.

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. Douglass, A. P., et al. "Population Genomics Shows No Distinction between Pathogenic *Candida krusei* and Environmental *Pichia kudriavzevii*: One Species, Four Names." PLoS Pathog. 14 (2018): e1007138. PubMed: 30024981.
2. Burnham, C. D., Personal Communication.
3. [HMP ID 1558](#) (*C. krusei*, strain CAB39-6420)
4. Guinea, J. "Global Trends in the Distribution of *Candida* Species Causing Candidemia." Clin. Microbiol. Infect. 20 (2014): 5-10. PubMed: 24506442.
5. Pfaller, M. A., et al. "*Candida krusei*, a Multidrug-Resistant Opportunistic Fungal Pathogen: Geographic and Temporal Trends from the ARTEMIS DISK Antifungal Surveillance Program, 2001 to 2005." J. Clin. Microbiol. 46 (2008): 515-521. PubMed: 18077633.

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

