

## Candida albicans, Strain P94015

### Catalog No. NR-29446

**For research use only. Not for use in humans.**

#### Contributor:

David R. Soll, Professor, The University of Iowa Research Foundation, The University of Iowa, Iowa, USA

#### Manufacturer:

BEI Resources

#### Product Description:

Classification: Mitosporic *Saccharomycetales*; *Candida*

Species: *Candida albicans*

Strain/Isolate: P94015

Original Source: *Candida albicans* (*C. albicans*), strain P94015 was isolated from the bloodstream of a human with a bloodstream infection in Utah, USA.<sup>1</sup>

Comment: Strain P94015 is a member of genetic clade I and is known to have an **a/a** MTL genotype.<sup>1,2</sup> The complete genome of *C. albicans*, strain P94015 has been sequenced (GenBank: [AJIS00000000](https://www.ncbi.nlm.nih.gov/nuccore/AJIS00000000)).

*C. albicans* is a eukaryotic, pathogenic obligate aerobe that is responsible for the majority of forms of candidiasis and is responsible for superficial as well as life-threatening systemic infections. It is commonly isolated from the environment and can be a component of the microbial floras of the human oral cavity, gastrointestinal tract or vagina. Several features of *C. albicans* contribute to its virulence. These include the secretion of hydrolytic enzymes, the ability to adhere to host cells and tissues, phenotypic switching (a phenomena that involves changing several growth and morphological characteristics at the same time) and morphological dimorphism (growth can be yeast-like or mycelial). *C. albicans* is generally diploid and exhibits considerable natural heterozygosity.<sup>3,4,5,6,7</sup>

#### Material Provided:

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

#### Packaging/Storage:

NR-29446 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:

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 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 albicans*, Strain P94015, NR-29446."

#### 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.

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## References:

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2. Wu, W., et al. "Heterozygosity of Genes on the Sex Chromosome Regulates *Candida albicans* Virulence." Mol. Microbiol. 64 (2007): 1587-1604. PubMed: 17555440.
3. Kim, J. and P. Sudbery. "*Candida albicans*, a Major Human Fungal Pathogen." J. Microbiol. 49 (2011): 171-177. PubMed: 21538235.
4. Karkowska-Kuleta, J., M. Rapala-Kozik and A. Kozik. "Fungi Pathogenic to Humans: Molecular Bases of Virulence of *Candida albicans*, *Cryptococcus neoformans* and *Aspergillus fumigatus*." Acta Biochim. Pol. 56 (2009): 211-224. PubMed: 19543556.
5. Niimi, M., R. D. Cannon and B. C. Monk. "*Candida albicans* Pathogenicity: A Proteomic Perspective." Electrophoresis 20 (1999): 2299-2308. PubMed: 10493133.
6. Jones, T., et al. "The Diploid Genome Sequence of *Candida albicans*." Proc. Natl. Acad. Sci. USA. 101 (2004): 7329-7334. PubMed: 15123810.
7. d'Enfert, C., et al. "CandidaDB: A Genome Database for *Candida albicans* Pathogenomics." Nucleic Acids Res. 33 (2005): D353-D357. PubMed: 15608215.

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