

***Candida albicans*, Strain P57072**

Catalog No. NR-29435

For research use only. Not for human use.

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: P57072

Original Source: *Candida albicans* (*C. albicans*), strain P57072 is a bloodstream isolate from a person with a bloodstream infection collected in Iowa City, Iowa, USA, in 2000.¹

Comment: Strain P57072 is a member of genetic clade II and has an alpha/alpha *MTL* genotype.^{1,2}

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.³⁻⁵ The whole genome sequence for the diploid form of *C. albicans*, strain SC5314 has been completed (GenBank: [AACQ00000000](http://www.ncbi.nlm.nih.gov/GenBank/AAQ00000000); [CandidaDB](http://www.candidadb.org)).^{6,7}

Material Provided:

Each vial of NR-29435 contains approximately 0.5 mL of yeast culture in Yeast Mold broth containing 20% glycerol.

Packaging/Storage:

NR-29435 was packaged aseptically in cryovials and is provided frozen on dry ice. The product should be stored at -60°C or colder.

Growth Conditions:

Media:

Yeast Mold or equivalent

Yeast Agar or equivalent

Incubation:

Temperature: 25°C to 30°C

Atmosphere: Aerobic

Propagation:

1. Keep vial frozen until ready for use; thaw rapidly.
2. 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 P57072, NR-29435."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; 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.

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. Pujol, C., et al. "Drug Resistance is Not Directly Affected by Mating Type Locus Zygosity in *Candida albicans*." Antimicrob. Agents Chemother. 47 (2003): 1207-1212. PubMed: 12654648.
2. Lockhart, S. R., et al. "In *Candida albicans*, White-Opaque Switchers are Homozygous for Mating Type." Genetics 162 (2002): 737-745. PubMed: 12399384.
3. Wu, W., et. al. "Heterozygosity of Genes on the Sex Chromosome Regulates *Candida albicans* Virulence." Mol. Microbiol. 64 (2007): 1587-1604. PubMed: 17555440.
4. Kim, J. and P. Sudbery. "*Candida albicans*, a Major Human Fungal Pathogen." J. Microbiol. 49 (2011): 171-177. PubMed: 21538235.
5. 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.
6. Niimi, M., R. D. Cannon and B. C. Monk. "*Candida albicans* Pathogenicity: a Proteomic Perspective." Electrophoresis 20 (1999): 2299-2308. PubMed: 10493133.
7. Jones, T., et al. "The Diploid Genome Sequence of *Candida albicans*." Proc. Natl. Acad. Sci. U.S.A. 101 (2004): 7329-7334. PubMed: 15123810.
8. d'Enfert, C., et al. "CandidaDB: a Genome Database for *Candida albicans* Pathogenomics." Nucleic Acids Res. 33 (2005): D353-D357. PubMed: 15608215.

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

