Candida albicans, Strain CAI4-F2-Neut5L-NAT1-mCherry-GFP

Catalog No. NR-51634

For research use only. Not for human use.

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Manufacturer:
BEI Resources

Product Description:
Classification: *Saccharomycetaceae*, *Candida*
Species: *Candida albicans*
Strain: CAI4-F2-Neut5L-NAT1-mCherry-GFP
Original Source: *Candida albicans (C. albicans)*, strain CAI4-F2-Neut5L-NAT1-mCherry-GFP was deposited to BEI Resources as a transgenic reporter strain that constitutively expresses green fluorescent protein (GFP) and red fluorescent protein via mCherry.[1,2] Strain CAI4-F2-Neut5L-NAT1-mCherry-GFP was engineered by integrating the GFP and mCherry fluorescent tags, driven by the bidirectional *ADH1* promoter, and a nourseothricin resistance (NATR) cassette at the Neut5L locus of *C. albicans*, strain CAI4-F2.[2] Strain CAI4-F2 is a homozygous *URA3* deletion mutant of strain CAI4, which was derived from the parental strain SC5314, a clinical isolate collected in the 1980s from a patient with generalized candidiasis in New York, USA.[3,4]
Comments: *C. albicans*, strain CAI4-F2-Neut5L-NAT1-mCherry-GFP is reported as genotype ura3::imm434/ura3::imm434 iro1/iro1::imm434 and has been used as an *in vitro* system for fluorescent sorting of *C. albicans* with macrophages.[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.[5,6,7,8,9,10]

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

Packaging/Storage:
NR-51634 was packaged aseptically in cryovials and 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:
Yeast Mold broth or equivalent
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 40 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 CAI4-F2-Neut5L-NAT1-mCherry-GFP, NR-51634."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

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