

Overview

Useful For

Detecting *Candida auris* in whole blood specimens

This test should **not be used** to determine cure or to monitor response to therapy.

Method Name

Real-Time Polymerase Chain Reaction (PCR)

NY State Available

Yes

Specimen

Specimen Type

Whole Blood EDTA

Ordering Guidance

This test **should not be ordered** for surveillance purposes. Order CAURS / *Candida auris* Surveillance, Molecular Detection, PCR, Varies and collect an axilla/groin swab for surveillance.

Additional Testing Requirements

This test should always be performed in conjunction with FBL / Fungal Culture, Blood, which has different collection requirements; see FBL for specifics.

Shipping Instructions

Specimen **must arrive** within 7 days of collection.

Necessary Information

Specimen source is required.

Specimen Required

Container/Tube: Lavender top (EDTA)

Specimen Volume: 3 mL

Collection Instructions: Send whole blood specimen in original tube. **Do not aliquot**

Forms

[If not ordering electronically, complete, print, and send a Microbiology Test Request \(T244\)](#) with the specimen.

Specimen Minimum Volume

0.3 mL

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

Clinical & Interpretive**Clinical Information**

Candida auris can cause serious, and sometimes fatal, infections, is often resistant to one or more classes of antifungal drugs, and inappropriate treatment may occur as it can be misidentified in the laboratory. In addition, *Candida auris* appears to be more resistant to disinfection than other yeasts, leading to prolonged survival in the environment, increasing the possibility of transmission in hospitals and nursing homes.

The *C auris* polymerase chain reaction assay can be used to detect *C auris* from blood.

Reference Values

Not applicable

Interpretation

A positive result indicates the presence of *Candida auris* DNA.

A negative result indicates the absence of detectable *C auris* DNA.

An inhibited result indicates that inhibitors are present in the specimen that could prevent the detection of *C auris* DNA. A new specimen can be resubmitted under a new order, if desired.

Cautions

A negative result does not rule out the presence of *Candida auris* because the organism may be present at levels below the limit of detection for this assay.

This assay detects *C auris* nucleic acid and, therefore, does not distinguish between viable, disease-related organisms and nucleic acid persisting from prior or treated infection. Test results should be correlated with patient symptoms and clinical presentation before a definitive diagnosis is made.

Supportive Data

During test verification, 32 culture isolates of *Candida auris*, previously identified using the Bruker matrix-assisted laser desorption/ionization time-of-flight mass spectrometer, were tested, and all 32 positively identified as *C auris* by this

polymerase chain reaction (PCR) assay.

Verification studies indicated that the limit of detection (LOD) for *C auris* spiked into blood was 54 colony-forming units (CFU)/20 mL reaction. To evaluate the accuracy of the assay, 30 blood specimens were spiked with *C auris* at 1 log above the LOD and 29/30 were positive (97%) by the PCR assay.

A specificity panel consisting of 78 common skin flora organisms or pathogens (bacteria, yeast, molds, viruses, and parasites) and all were negative by the PCR assay. No positivity was found with any other species of *Candida* including the closely related *Candida duobushaemulonii* and *Candida haemulonii*.

Clinical Reference

1. Spivak ES, Hanson KE: Candida auris: an emerging fungal pathogen. J Clin Microbiol. 2018 Jan;56(2):e01588-17
2. Centers for Disease Control and Prevention (CDC) National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), Division of Foodborne, Waterborne, and Environmental Diseases (DFWED): *Candida auris*. CDC; Updated December 27, 2022. Accessed March 8, 2023. Available at: www.cdc.gov/fungal/candida-auris/index.html
3. Navalkele BD, Revankar S, Chandrasekar P: Candida auris: a worrisome, globally emerging pathogen. Expert Rev Anti Infect Ther. 2017 Sep;15(9):819-827

Performance

Method Description

Genomic DNA is extracted. The extracted DNA is placed on the LightCycler 480 instrument, which amplifies and monitors by fluorescence, the development of target nucleotide sequences after each polymerase chain reaction (PCR) cycle. A specific 269 base pairs target sequence from a portion of the 28S rDNA gene from *Candida auris* is amplified and the resulting segment is detected by melt-curve analysis using sequence-specific fluorescence resonance energy transfer hybridization probes. An internal control is added to every sample to monitor for extraction and PCR inhibition in the specimen. (Walchak RC, Buckwalter SP, Zinsmaster NM, et al: *Candida auris* direct detection from surveillance swabs, blood, and urine using a laboratory-developed PCR method. J Fungi (Basel). 2020 Oct 15;6(4):224. doi: 10.3390/jof6040224)

PDF Report

No

Day(s) Performed

Monday through Sunday

Report Available

1 to 3 days

Specimen Retention Time

7 days

Performing Laboratory Location

Rochester

Fees & Codes

Fees

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact [Customer Service](#).

Test Classification

This test was developed, and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information

87481

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
CAURB	Candida auris PCR, B	95766-2

Result ID	Test Result Name	Result LOINC® Value
SRCAB	Specimen Source	31208-2
607882	C auris PCR, Result, B	95766-2