

## Overview

### Useful For

*Histoplasma*:

Aiding in the diagnosis of *Histoplasma* meningitis

*Blastomyces*:

Detecting antibodies in patients having blastomycosis

### Profile Information

Test ID	Reporting Name	Available Separately	Always Performed
CHIST	Histoplasma Ab, CSF	Yes	Yes
CBL	Blastomyces Ab Immunodiffusion, CSF	Yes	Yes

### Testing Algorithm

See [Meningitis/Encephalitis Panel Algorithm](#) in Special Instructions.

### Special Instructions

- [Meningitis/Encephalitis Panel Algorithm](#)

### Method Name

CHIST: Complement Fixation (CF)/Immunodiffusion (ID)

CBL: Immunodiffusion (ID)

### NY State Available

Yes

## Specimen

### Specimen Type

CSF

### Specimen Required

**Container/Tube:** Sterile vial

**Specimen Volume:** 1.5 mL

### Forms

If not ordering electronically, complete, print, and send a [Microbiology Test Request](#) (T732) with the specimen.

### Specimen Minimum Volume

1 mL

**Reject Due To**

Gross hemolysis	OK
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**Specimen Stability Information**

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

**Clinical and Interpretive**

**Clinical Information**

*Histoplasma*

*Histoplasma capsulatum* is a soil saprophyte that grows well in soil enriched with bird droppings. The usual disease is self-limited, affects the lungs, and is asymptomatic. Chronic cavitary pulmonary disease, disseminated disease, and meningitis may occur and can be fatal, especially in young children and immunosuppressed patients.

*Blastomyces*

The dimorphic fungus, *Blastomyces dermatitidis*, causes blastomycosis. When the organism is inhaled, it causes pulmonary disease: cough, pain, and hemoptysis, along with fever and night sweats. It commonly spreads to the skin, bone, or internal genitalia where suppuration and granulomas are typical. Occasionally, primary cutaneous lesions after trauma are encountered; however, this type of infection is uncommon. Central nervous system disease is uncommon.

**Reference Values**

*Histoplasma* ANTIBODY

Mycelial by complement fixation: Negative

Yeast by complement fixation: Negative

Antibody by immunodiffusion: Negative

*Blastomyces* ANTIBODY IMMUNODIFFUSION

Negative

**Interpretation**

*Histoplasma*:

-Any positive serologic result in spinal fluid is significant.

-Simultaneous appearance of the H and M precipitin bands indicates active histoplasmosis.

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-The M band alone indicates active or chronic disease or a recent skin test for histoplasmosis.

*Blastomyces:*

A positive result is suggestive of infection, but the results cannot distinguish between active disease and prior exposure. Furthermore, detection of antibodies in cerebrospinal fluid (CSF) may reflect intrathecal antibody production, or may occur due to passive transfer or introduction of antibodies from the blood during lumbar puncture.

Routine fungal culture of clinical specimens (eg, CSF) is recommended in cases of suspected blastomycosis involving the central nervous system.

### Cautions

*Histoplasma:*

-Antibody levels may be low in spinal fluid in cases of Histoplasma meningitis.

-Histoplasmin skin tests yield specific antibodies in titratable quantity, and may cause difficulties in interpretation.

-Cross-reacting antibodies with coccidioidomycosis or blastomycosis may cause false-positive results for Histoplasmosis.

*Blastomyces:*

-A negative result does not rule out blastomycosis.

-Patients with histoplasmosis may have low-titered crossreactions.

### Clinical Reference

Kaufman L, Kovacs JA, Reiss E: Clinical Immunomycology. In Manual of Clinical and Laboratory Immunology. Edited by NL Rose, E Conway-de Macario, JD Folds, et al. Washington, DC, ASM Press, 1997, pp 588-589

### Performance

#### Method Description

*Histoplasma*

Both immunodiffusion (ID) and complement fixation (CF) tests are used to detect antibodies to *Histoplasma capsulatum*. For ID, the antigen is a culture filtrate, histoplasmin. H and M precipitin bands are identified. For the CF test, the antigens are histoplasmin and a yeast form of *H capsulatum*; the latter is more sensitive. (Roberts GD: Fungi. In Laboratory Procedures in Clinical Microbiology. Second edition. Edited by JA Washington II. New York, Springer-Verlag, 1985)

*Blastomyces*

The ID test is a qualitative test employed for the detection of precipitating antibodies present in the serum. Soluble antigens of the fungus are placed in wells of an agarose gel-filled Petri dish and the patient's serum and a control (positive) serum are placed in adjoining wells. If present, specific precipitate antibody will form precipitin lines between the wells. Their comparison to the control serum establishes the results. When performing the ID test, only precipitin bands of identity with the reference bands are significant. (Kaufman L, McLaughlin DW, Clark MJ, Blumer S: Specific immunodiffusion test for blastomycosis. Appl Microbiol 1973;26:244-247, Williams JE, Murphy R, Standard PG, Phan JP: Serologic response in blastomycosis: diagnostic value of double immunodiffusion assay. Am Res

Resp Dis 1981;123:209-212)

**PDF Report**

No

**Day(s) and Time(s) Test Performed**

Monday; 6 a.m.

Tuesday through Friday; 9:30 a.m.

**Analytic Time**

3 day

**Maximum Laboratory Time**

6 days

**Specimen Retention Time**

14 days

**Performing Laboratory Location**

Rochester

**Fees and 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 Regional Manager. For assistance, contact [Customer Service](#).

**Test Classification**

This test uses a standard method. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

**CPT Code Information**

86698 x 3-*Histoplasma* Antibody, CSF

86612-*Blastomyces* Antibody, CSF

**LOINC® Information**

Test ID	Test Order Name	Order LOINC Value
HICBL	Histoplasma/Blastomyces Panel, CSF	91683-3

Result ID	Test Result Name	Result LOINC Value
15134	Blastomyces Immunodiffusion (CSF)	51741-7
15118	Histoplasma Mycelial (CSF)	27220-3
15119	Histoplasma Yeast (CSF)	27209-6

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Result ID	Test Result Name	Result LOINC Value
15120	Histoplasma Immunodiffusion (CSF)	91682-5