MAYO CLINIC LABORATORIES

Test Definition: SHSTO

Histoplasma Antibody, Serum

Overview

Useful For
Aiding in the diagnosis of active histoplasmosis using serum specimens

Testing Algorithm
For information see Meningitis/Encephalitis Panel Algorithm.

Special Instructions
- Meningitis/Encephalitis Panel Algorithm

Method Name
Complement Fixation (CF)/Immunodiffusion (ID)

NY State Available
Yes

Specimen

Specimen Type
Serum

Specimen Required
Collection Container/Tube:
Preferred: Serum gel
Acceptable: Red top
Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL
Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Forms
If not ordering electronically, complete, print, and send Infectious Disease Serology Test Request (T916) with the specimen.

Specimen Minimum Volume
See Specimen Required

Reject Due To

Gross hemolysis	Reject

Gross lipemia	Reject

Specimen Stability Information

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

Clinical & Interpretive

Clinical Information

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

Reference Values

MYCELIAL BY COMPLEMENT FIXATION (CF):
Negative (positives reported as titer)

YEAST BY CF:
Negative (positives reported as titer)

ANTIBODY BY IMMUNODIFFUSION:
Negative (positives reported as band present)

Interpretation

Complement fixation (CF) titer results of 1:32 or higher indicate active disease. A rising CF titer is associated with progressive infection.

Positive immunodiffusion test results supplement findings of the CF test. The simultaneous appearance of both H and M precipitin bands indicates active histoplasmosis. The M precipitin band alone indicates early or chronic disease or a recent histoplasmosis skin test.

Patients infected with *Histoplasma capsulatum* demonstrate a serum antibody with a rising titer within 6 weeks of infection. A rising titer is associated with progressive infection. Specific antibody persists for a few weeks to a year, regardless of clinical improvement.

Cautions

Recent histoplasmosis skin tests must be avoided because the test causes a misleading rise in complement fixation titer, as well as an M precipitin band, in approximately 17% of patients having previous exposure to *Histoplasma capsulatum.*

Cross-reacting antibodies sometimes present interpretive problems in patients having blastomycosis or coccidioidomycosis.

Clinical Reference

1. Kaufman L, Kovacs JA, Reiss E: Clinical Immunomycology. In: Rose NR, de Macario ED, Folds JD, Lane HC, Nakamura RM, eds. Manual of Clinical and Laboratory Immunology. 5th ed. ASP Press; 1997
2. Deepe GS: *Histoplasma capsulatum* histoplasmosis. In: Bennett JE, Dolin R, Blaser MJ, eds. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 9th ed. Elsevier; 2020:3162-3176

Performance

Method Description

Both immunodiffusion and complement fixation (CF) tests are used to detect antibodies to *Histoplasma capsulatum*. For immunodiffusion, the antigen used is a culture filtrate. Histoplasmin H and M precipitins can be identified by the assay. For the CF test, antigens are histoplasmin and a yeast form antigen of *Histoplasma capsulatum*; the latter is more sensitive.(Roberts GD: Fungi. In: Washington II JA, ed. Laboratory Procedures in Clinical Microbiology. 2nd ed. Springer-Verlag, 1985; Bennett JE, Dolin R, Blaser MJ, eds. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 9th ed. Elsevier; 2020)

PDF Report

No

Day(s) Performed

Monday through Friday

Report Available

2 to 7 days

Specimen Retention Time

14 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 has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

86698 x 3

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
SHSTO	Histoplasma Ab, S	90227-0

Result ID	Test Result Name	Result LOINC® Value
15121	Histoplasma Mycelial	20573-2
15122	Histoplasma Yeast	20574-0
15123	Histoplasma Immunodiffusion	90232-0