MAYO CLINIC LABORATORIES

Test Definition: SAM

Entamoeba histolytica Antibody, Serum

Overview

Useful For
As an adjunct in the diagnosis of extraintestinal amebiasis, especially liver abscess

Method Name
Enzyme-Linked Immunosorbent Assay (ELISA)

NY State Available
Yes

Specimen

Specimen Type
Serum

Ordering Guidance
Direct detection of *Entamoeba histolytica* in fecal specimens is recommended to diagnose intestinal amebiasis. See OAP / Ova and Parasite, Concentrate and Permanent Smear, Microscopy, Feces or OAPNS / Ova and Parasite, Microscopy, Varies.

Shipping Instructions

Specimen Required
Container/Tube:
Preferred: Serum gel
Acceptable: Red top
Specimen Volume: 0.5 mL

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

Specimen Minimum Volume
0.15 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	7 days	

Clinical & Interpretive

Clinical Information

Amebiasis is an infection by the protozoan parasite, *Entamoeba histolytica*. The infection is acquired by ingestion of cysts in fecally contaminated food or water; excystation and infection occur in the large intestine. After excystation, trophozoites attach to the intestinal wall and liberate extracellular enzymes that enable invasion of the mucosa and spread to other organs, especially the liver and lung where abscesses develop.

Amebiasis (or amebic dysentery) can cause bloody diarrhea accompanied by fever and prostration. White and red blood cells are found in the stool. Liver abscess can develop several weeks to months later producing hepatomegaly and fever.

Pathogenic *(E histolytica)* and nonpathogenic *(Entamoeba dispar)* species of *Entamoeba* occur. Additionally, some of those infected with pathogenic strains are asymptomatic cyst carriers.

Serology may be particularly useful in supporting the diagnosis of amebic liver abscess in patients without a definite history of intestinal amebiasis and who have not spent substantial periods of time in endemic areas.

Reference Values

Negative
Reference values apply to all ages.

Interpretation

A positive result suggests current or previous infection with *Entamoeba histolytica*.

Since pathogenic and nonpathogenic species of *Entamoeba* cannot be differentiated microscopically, some authorities believe a positive serology indicates the presence of the pathogenic species (ie, *E histolytica*).

Cautions

Previous episodes of intestinal amebiasis may produce a positive serology.

Serologic results should be used as an aid in diagnosis and should not be interpreted as diagnostic by themselves.

Clinical Reference

1. Bruckner DA: Amebiasis. Clin Microbiol Rev. 1992 Oct;5(4):356-369. doi: 10.1128/CMR.5.4.356
2. Petri WA, Haque R, Moonah SN: *Entamoeba* species, including amebic colitis and liver abscess. In: Bennett JE, Dolin R, Blaser MJ, eds. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 9th ed. Elsevier; 2020:3273-3286

Performance

Method Description
Purified antigens are coated to a microwell plate. Antibodies in the patient samples bind to the antigens and are determined during the second step by using enzyme-labelled protein A (the conjugate). The enzyme converts the colorless substrate (urea peroxide/TMB) to a blue end product. The enzyme reaction is stopped by adding sulfuric acid and the colour of the mixture switches from blue to yellow at the same time. The final measurement is carried out at 450 nm on a photometer using a reference wavelength greater than or equal to 620 nm.(Package insert: RIDASCREEN Entamoeba histolytica IgG. R-Biopharm AG; 07/10/2019)

PDF Report
No

Day(s) Performed
Tuesday, Thursday

Report Available
Same day/1 to 5 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 Regional Manager. 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
86753

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value

SAM	E. histolytica Ab, S	22285-1

Result ID	Test Result Name	Result LOINC® Value
9049	E. histolytica Ab, S	22285-1