MAYO CLINIC LABORATORIES

Test Definition: EMA

Endomysial Antibodies, IgA, Serum

Overview

Useful For

Analysis of IgA-endomysial antibodies for the diagnosis of dermatitis herpetiformis and celiac disease

Monitoring adherence to gluten-free diet in patients with dermatitis herpetiformis and celiac disease

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
EMAT	EMA Titer, S (IgA)	No	No

Testing Algorithm

If the IgA-endomysial antibodies result is positive or indeterminate, then the antibody titer will be performed at an additional charge.

The following algorithms are available:
-Celiac Disease Comprehensive Cascade Test Algorithm
-Celiac Disease Diagnostic Testing Algorithm
-Celiac Disease Gluten-Free Cascade Test Algorithm
-Celiac Disease Routine Treatment Monitoring Algorithm
-Celiac Disease Serology Cascade Test Algorithm

Special Instructions

- Celiac Disease Diagnostic Testing Algorithm
- Celiac Disease Comprehensive Cascade Test Algorithm
- Celiac Disease Gluten-Free Cascade Test Algorithm
- Celiac Disease Routine Treatment Monitoring Algorithm
- Celiac Disease Serology Cascade Test Algorithm

Method Name

Indirect Immunofluorescence Assay (IFA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Ordering Guidance

Cascade testing is recommended for celiac disease. Cascade testing ensures that testing proceeds in an algorithmic fashion. The following cascades are available; select the appropriate one for your specific patient situation.

-For complete testing including human leukocyte antigen (HLA) DQ, order CDCOM / Celiac Disease Comprehensive Cascade, Serum and Whole Blood

-For complete testing excluding HLA DQ, order CDSP / Celiac Disease Serology Cascade, Serum

-For patients already adhering to a gluten-free diet, order CDGF / Celiac Disease Gluten-Free Cascade, Serum and Whole Blood

To order individual tests, see Celiac Disease Diagnostic Testing Algorithm

Specimen Required

Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube:
Preferred: Serum gel
Acceptable: Red top
Submission Container/Tube: Plastic vial
Specimen Volume: 2 mL Serum
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Forms

If not ordering electronically, complete, print, and send a Gastroenterology and Hepatology Test Request (T728) with the specimen.

Specimen Minimum Volume

Serum: 0.5 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Gross icterus	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	30 days	

Clinical & Interpretive

Clinical Information

Circulating IgA endomysial antibodies are present in 70% to 80% of patients with dermatitis herpetiformis or celiac disease, and in nearly all such patients who have high grade gluten-sensitive enteropathy and are not adhering to a gluten-free diet.

Because of the high specificity of endomysial antibodies for celiac disease, this test may obviate the need for multiple small bowel biopsies to verify the diagnosis. This may be particularly advantageous in the pediatric population, including the evaluation of children with failure to thrive.

Reference Values

Negative

Interpretation

Results will be negative in individuals without any known dermatitis herpetiformis or celiac disease as well as in patients with either dermatitis herpetiformis or celiac disease while adhering to gluten-free diet.

The finding of IgA-endomysial antibodies (EMA) is highly specific for dermatitis herpetiformis or celiac disease.

The titer of IgA-EMA generally correlates with the severity of gluten-sensitive enteropathy.

If patients strictly adhere to a gluten-free diet, the titer of IgA-EMA should begin to decrease within 6 to 12 months of onset of dietary therapy.

Occasionally, the staining results cannot be reliably interpreted as positive or negative because of strong smooth muscle staining, weak EMA staining or other factors. In these cases, the results will be reported as "indeterminate" and additional testing is recommended. For more information see TTGA / Tissue Transglutaminase Antibody, IgA, Serum and IGA / Immunoglobulin A (IgA), Serum.

Cautions

A negative result (absence of circulating IgA-endomysial antibodies) does not exclude the diagnosis of dermatitis herpetiformis or celiac disease.

Patients with mild gluten-sensitive enteropathy may have a negative result.

Clinical Reference

1. Peters MS, McEvoy MT. IgA antiendomysial antibodies in dermatitis herpetiformis. J Am Acad Dermatol. 1989;21(6):1225-1231. doi:10.1016/s0190-9622(89)70335-2
2. Chorzelski TP, Buetner EH, Sulej J, et al. IgA anti-endomysium antibody. A new immunological marker of dermatitis herpetiformis and coeliac disease. Br J Dermatol. 1984;111(4):395-402. doi:10.1111/j.1365-2133.1984.tb06601.x
3. Kapuscinska A, Zalewski T, Chorzelski TP, et al. Disease specificity and dynamics of changes in IgA class anti-endomysial antibodies in celiac disease. J Pediatr Gastroenterol Nutr. 1987;6(4):529-534. doi:10.1097/00005176-198707000-00006
4. Elwenspoek MMC, Jackson J, Dawson S, et al. Accuracy of potential diagnostic indicators for coeliac disease: a systematic review protocol. BMJ Open. 2020;10(10):e038994. doi:10.1136/bmjopen-2020-038994

Performance

Method Description
Frozen sections of primate esophagus substrate are overlaid with dilutions of patient's serum, incubated, covered with fluorescein-conjugated IgA antiserum, and interpreted with a fluorescence microscope. (Package insert: NOVA Lite Monkey Oesophagus IFA Kit/Slides. Inova Diagnostics; 05/2018; Chorzelski TP, Beutner EH, Sulej J, et al. IgA anti-endomysium antibody: a new immunological marker of dermatitis herpetiformis and coeliac disease. Br J Dermatol. 1984;111[4]:395-402. doi:10.1111/j.1365-2133.1984.tb06601.x; Kupascinska A, Zalewski T, Chorzelski TP, et al. Disease specificity and dynamics of changes in IgA class anti-endomysial antibodies in celiac disease. J Pediatr Gastroenterol Nutr. 1987;6[4]:529-534. doi:10.1097/00005176-198707000-00006)

PDF Report
No

Day(s) Performed
Monday through Friday

Report Available
2 to 7 days

Specimen Retention Time
14 days

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Main Campus

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 modified from the manufacturer's instructions. 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 US Food and Drug Administration.

CPT Code Information
86231
86231-titer (if appropriate)

LOINC® Information

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Test Definition: EMA

Endomysial Antibodies, IgA, Serum

Test ID	Test Order Name	Order LOINC® Value
EMA	Endomysial Abs, S (IgA)	46126-9

Result ID	Test Result Name	Result LOINC® Value
9360	Endomysial Ab	46126-9