MAYO CLINIC LABORATORIES

Test Definition: CIFA

Cutaneous Immunofluorescence Antibodies, IgA, Serum

Overview

Useful For

Confirming the presence of IgA antibodies to diagnose pemphigoid, pemphigus, epidermolysis bullosa acquisita, or bullous lupus erythematosus

Method Name

Indirect Immunofluorescence Assay (IFA)

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: 2 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume

0.5 mL

Reject Due To

Gross hemolysis	OK
Gross lipemia	Reject
Gross icterus	OK

Specimen Stability Information

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

	Frozen	30 days	

Clinical & Interpretive

Clinical Information

Immunoglobulin A anti-basement membrane zone (BMZ) antibodies are produced by patients with pemphigoid. In most patients with bullous pemphigoid, serum contains IgA anti-BMZ antibodies, while in cicatricial pemphigoid circulating IgA anti-BMZ antibodies are found in a minority of cases. Sensitivity of detection of anti-BMZ antibodies is increased when serum is tested using sodium chloride-split primate skin as substrate.

Circulating IgA anti-BMZ antibodies are also detected in patients with epidermolysis bullosa acquisita and bullous eruption of lupus erythematosus.

IgA anti-cell surface (CS) antibodies are produced by patients with pemphigus. The titer of anti-CS antibodies generally correlates with disease activity of pemphigus.

Reference Values

Report includes presence and titer of circulating antibodies. If serum contains basement membrane zone antibodies on split-skin substrate, patterns will be reported as:
1) Epidermal pattern, consistent with pemphigoid
2) Dermal pattern, consistent with epidermolysis bullosa acquisita

Negative in normal individuals

Interpretation

Indirect immunofluorescence (IF) testing may be diagnostic when histologic or direct IF studies are only suggestive, nonspecific, or negative.

Anti-cell surface antibodies correlate with a diagnosis of pemphigus.

Anti-basement membrane zone (BMZ) antibodies correlate with a diagnosis of bullous pemphigoid, cicatricial pemphigoid, epidermolysis bullosa acquisita (EBA), or bullous eruption of lupus erythematosus (LE).

If serum contains anti-BMZ antibodies, the pattern of fluorescence on sodium chloride (NaCl)-split skin substrate helps distinguish pemphigoid from EBA and bullous LE. Staining of the roof (epidermal side) or both epidermal and dermal sides of NaCl-split skin correlates with the diagnosis of pemphigoid, while fluorescence localized only to the dermal side of the split-skin substrate correlates with either EBA or bullous LE.

Cautions

Results should be interpreted in conjunction with clinical information, histologic pattern, and results of direct immunofluorescence (IF) study. In particular, the finding of low titer (< or =1:80) anti-CS antibodies should not be used alone (ie, without histologic or direct IF support) to confirm a diagnosis of pemphigus.

Clinical Reference

1. Caux F, Kirtschig G, Lemarchand-Venencie F, et al. IgA-epidermolysis bullosa acquisita in a child resulting in blindness. Br J Dermatol. 1997;137(2):270-275
2. Chorzelski TP, Jablonska S. IgA linear dermatosis of childhood (chronic bullous disease of childhood). Br J Dermatol. 1979;101(5):535-542
3. Guide SV, Marinkovich MP. Linear IgA bullous dermatosis. Clin Dermatol. 2001;19(6):719-727
4. Hashimoto T, Ebihara T, Nishikawa T. Studies of autoantigens recognized by IgA anti-keratinocyte cell surface antibodies. J Dermatol Sci. 1996;12(1):10-17
5. Lally A, Chamberlain A, Allen J, Dean D, Wojnarowska F. Dermal-binding linear IgA disease: an uncommon subset of a rare immunobullous disease. Clin Exp Dermatol. 2007;32(5):493-498
6. Tsuruta D, Ishii N, Hamada T, et al. IgA pemphigus. Clin Dermatol. 2011;29(4):437-442
7. Vodegel RM, de Jong MCJM, Pas HH, Jonkman MF. IgA-mediated epidermolysis bullosa acquisita: two cases and review of the literature. J Am Acad Dermatol. 2002;47(6):919-925
8. Willsteed E, Bhogal BS, Black MM, McKee P, Wojnarowska F. Use of 1M NaCl split skin in the indirect immunofluorescence of the linear IgA bullous dermatoses. J Cutan Pathol. 1990;17(3):144-148
9. Wilson BD, Beutner EH, Kumar V, Chorzelski TP, Jablonska S. Linear IgA bullous dermatosis. An immunologically defined disease. Int J Dermatol. 1985;24(9):569-574
10. Wojnarowska F, Collier PM, Allen J, Millard PR. The localization of the target antigens and antibodies in linear IgA disease is heterogeneous, and dependent on the methods used. Br J Dermatol. 1995;132(5):750-757
11. Tirumalae R, Kalegowda IY. Role of BIOCHIP indirect immunofluorescence test in cutaneous vesiculobullous diseases. Am J Dermatopathol. 2020;42(5):322-328

Performance

Method Description
Frozen sections of primate esophagus and sodium chloride-split primate skin are overlaid with dilutions of patient's serum, incubated, covered with fluorescein-conjugated IgA antiserum, and interpreted with a fluorescence microscope.(Unpublished Mayo method)

PDF Report
No

Day(s) Performed
Monday through Friday

Report Available
2 to 7 days

Specimen Retention Time
30 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 was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information

88346

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
CIFA	Cutaneous Immfluor. Ab (IgA), S	104828-9

Result ID	Test Result Name	Result LOINC® Value
610628	Cell Surface Ab IgA	104829-7
610629	Basement Membrane IgA	104830-5
610630	Primate Esophagus IgA	104833-9
610631	Primate Split Skin IgA	104834-7
610632	Other	48767-8