MAYO CLINIC LABORATORIES

Test Definition: CIFS

Cutaneous Immunofluorescence Antibodies, IgG, Serum

Overview

Useful For

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

Method Name

Indirect Immunofluorescence

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	
	Frozen	30 days	

	Ambient	14 days	

Clinical & Interpretive

Clinical Information

Immunoglobulin G anti-basement membrane zone (BMZ) antibodies are produced by patients with pemphigoid. In most patients with bullous pemphigoid, serum contains IgG anti-BMZ antibodies, while in cicatricial pemphigoid circulating IgG 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 IgG anti-BMZ antibodies are also detected in patients with epidermolysis bullosa acquisita and bullous eruption of lupus erythematosus.

IgG 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-cell surface antibodies should not be used alone (ie, without histologic or direct IF support) to confirm a diagnosis of pemphigus.

Clinical Reference

1. Beutner EH, Chorzelski TP, Kumar V, eds. Immunopathology of the Skin. 3rd ed. Wiley Medical Publication; 1987
2. Gammon WR, Briggaman RA, Inman AO 3rd, Queen LL, Wheeler CE. Differentiating anti-lamina lucida and anti-sublamina densa anti-BMZ antibodies by indirect immunofluorescence on 1.0 M sodium chloride-separated skin. J Invest Dermatol. 1984;82(2):139-144
3. 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 IgG 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
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 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
88350

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
CIFS	Cutaneous Immfluor. Ab, S (IgG)	In Process

Result ID	Test Result Name	Result LOINC® Value
21539	Cell Surface Ab IgG	21352-0
21540	Basement Membrane IgG	29994-1
21541	Primate Esophagus IgG	66881-4
21542	Primate Split Skin IgG	45178-1
21638	Other	48767-8