Test Definition: GBACS

Gamma-Amino Butyric Acid Type A (GABA-A) Receptor Antibody, Cell-Binding Assay, Serum

Overview

Useful For
Evaluating patients with suspected autoimmune encephalitis and autoimmune epilepsy using serum specimens

Method Name
Cell-Binding Assay (CBA)

NY State Available
Yes

Specimen

Specimen Type
Serum

Specimen Required
Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube:
Preferred: Red top
Acceptable: Serum gel
Submission Container/Tube: Plastic vial
Specimen Volume: 0.3 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume
0.25 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)	28 days	
	Ambient	72 hours	

	Frozen	28 days	

Clinical & Interpretive

Clinical Information

Gamma-amino butyric acid type A (GABA-A) receptor autoantibodies are highly predictive of GABA-A receptor autoimmune encephalitis. Patients who are seropositive for GABA-A receptor encephalitis have characteristic clinical-radiologic presentations including frequent seizures and multifocal lesions in the white matter. Majority of patients are treatable with immunotherapy.

Reference Values

Negative

Interpretation

Seropositivity for gamma-amino butyric acid type A receptor autoantibodies supports the clinical diagnosis of autoimmune encephalitis with neurological presentations including seizures and multifocal lesions in the white matter. A search for thymoma cancer and a trial of immunotherapy should be considered.

Cautions

Negative results do not exclude the diagnosis of autoimmune encephalitis. Only 2% of autoimmune encephalitis cases are associated with autoantibodies against gamma-amino butyric acid type A receptor.

Clinical Reference

1. O'Connor K, Waters P, Komorowski L, et al. GABAA receptor autoimmunity A multicenter experience. Neurol Neuroimmunol Neuroinflamm 2019;6(3):e552. doi:10.1212/NXI.0000000000000552
2. Spatola M, Petit-Pedrol M, Simabukuro MM, et al. Investigations in GABAA receptor antibody-associated encephalitis. Neurology. 2017;88(11):1012-1020. doi:10.1212/WNL.0000000000003713
3. Waters P, Irani S. GABA-A receptor antibodies and their clinical associations. Neurology. 2017; 88:1010-1011
4. Petit-Pedrol M, Armangue T, Peng X, et al. Encephalitis with refractory seizures, status epilepticus, and antibodies to the GABAA receptor: a case series, characterization of the antigen, and analysis of the effects of antibodies. Lancet Neurol. 2014;13(3):276-286

Performance

Method Description

Patient specimen is applied to a composite slide containing transfected and nontransfected EU90 cells. After incubation and washing, fluorescein-conjugated goat-antihuman IgG is applied to detect the presence of patient IgG binding.(Package insert: IIFT: Neurology Mosaics, Instructions for the indirect immunofluorescence test. EUROIMMUN, FA_112d-1_A_UK_C13, 02/25/2019)

PDF Report

No

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Day(s) Performed
Monday through Sunday

Report Available
5 to 10 days

Specimen Retention Time
2 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
86255

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
GBACS	GABA-A-R Ab CBA, S	101874-6

Result ID	Test Result Name	Result LOINC® Value
620232	GABA-A-R Ab CBA, S	101874-6