

# **Test Definition: GBACC**

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

## **Overview**

#### **Useful For**

Evaluating patients with suspected autoimmune encephalitis and autoimmune epilepsy using spinal fluid specimens

#### **Method Name**

Cell-Binding Assay (CBA)

## **NY State Available**

Yes

# **Specimen**

# **Specimen Type**

**CSF** 

## **Specimen Required**

Container/Tube: Sterile vial

Preferred: Collection vial number 1
Acceptable: Any collection vial
Specimen Volume: 1 mL

## **Forms**

<u>If not ordering electronically, complete, print, and send a Neurology Specialty Testing Client Test Request</u> (T732) with the specimen.

## **Specimen Minimum Volume**

0.4 mL

## **Reject Due To**

Gross hemolysis	Reject
Gross lipemia	Reject
Gross icterus	Reject

# **Specimen Stability Information**

Specimen Type Temperature	Time	Special Container
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CSF	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. The 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.00000000000552
- 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.00000000003713
- 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,



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FA\_112d-1\_A\_UK\_C13, 02/25/2019)

#### **PDF Report**

No

## Day(s) Performed

Monday through Sunday

## **Report Available**

5 to 10 days

## **Specimen Retention Time**

28 days

# **Performing Laboratory Location**

Mayo Clinic Laboratories - Rochester Main Campus

## **Fees & Codes**

#### **Fees**

- Authorized users can sign in to <u>Test Prices</u> for detailed fee information.
- Clients without access to Test Prices can contact <u>Customer Service</u> 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact <u>Customer Service</u>.

## **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
GBACC	GABA-A-R Ab CBA, CSF	103715-9

Result ID	Test Result Name	Result LOINC® Value
620231	GABA-A-R Ab CBA, CSF	103715-9