Overview

Useful For
Possible use in evaluating patients with stiff-man syndrome, autoimmune cerebellitis and other acquired central nervous system disorders affecting gabaminergic neurotransmission

Method Name
Radioimmunoassay (RIA)

NY State Available
Yes

Specimen

Specimen Type
CSF

Specimen Required
Container/Tube: Sterile vial

Specimen Volume: 1.5 mL

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

Specimen Minimum Volume
1 mL

Reject Due To

<table>
<thead>
<tr>
<th>Gross hemolysis</th>
<th>Reject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross lipemia</td>
<td>Reject</td>
</tr>
<tr>
<td>Gross icterus</td>
<td>Reject</td>
</tr>
</tbody>
</table>

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSF</td>
<td>Refrigerated (preferred)</td>
<td>28 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>28 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>72 hours</td>
<td></td>
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Clinical and Interpretive

Clinical Information
Glutamic acid decarboxylase (GAD) is a neuronal enzyme involved in the synthesis of the neurotransmitter gamma-aminobutyric acid (GABA). Serum antibodies directed against the 65-kd isoform of GAD (GAD65) are detected in heightened frequency in a variety of autoimmune neurologic disorders, including stiff-man (Moersch-Woltman) syndrome, autoimmune cerebellitis, some idiopathically acquired epilepsies, some rare acquired encephalomyelopathies with and without neoplasia, and in myasthenia gravis and Lambert-Eaton myasthenic syndrome.

GAD65 antibodies account for the majority of clinically recognized pancreatic islet cell antibodies, and are an important serological marker of predisposition to type 1 (insulin-dependent) diabetes. GAD65 autoantibodies also serve as a marker of predisposition to autoimmune disorders that commonly or sometimes coexist with type 1 diabetes, including autoimmune thyroid disease (eg, thyrotoxicosis, Graves disease, Hashimoto thyroiditis, hypothyroidism), pernicious anemia, premature ovarian failure, Addison disease (idiopathic adrenocortical failure), and vitiligo. GAD65 antibodies are found in the serum of approximately 8% of healthy subjects older than age 50, usually in low titer, but often accompanied by related “thyrogastric” autoantibodies.

Reference Values

< or =0.02 nmol/L

Reference values apply to all ages.

Interpretation

Intrathecal synthesis of glutamic acid decarboxylase 65 (GAD65) antibody has been demonstrated in patients with stiff-man syndrome, but cerebrospinal fluid (CSF) values are log orders lower than serum. We have not determined the frequency of GAD65 antibodies in spinal fluid of patients with various diagnoses.

Cautions

Clinical utility of this test remains to be determined.

This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held one week and assayed if sufficiently decayed, or canceled if radioactivity remains.

Clinical Reference


Performance

Method Description

(125)I-labeled recombinant human glutamic acid decarboxylase 65 (GAD65) and nonimmune human serum are incubated with the patient's diluted spinal fluid. Antihuman IgG and IgM are then added to form an

**PDF Report**

No

**Day(s) and Time(s) Test Performed**

Monday through Friday; 5 a.m., 2 p.m.

Saturday, Sunday; 7 a.m.

**Analytic Time**

3 days

**Maximum Laboratory Time**

6 days

**Specimen Retention Time**

28 days

**Performing Laboratory Location**

Rochester

**Fees and 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 Regional Manager. 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. This test has not been cleared or approved by the U.S. Food and Drug Administration.

**CPT Code Information**

86341

**LOINC® Information**

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<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<tbody>
<tr>
<td>GD65C</td>
<td>GAD65 Ab Assay, CSF</td>
<td>94359-7</td>
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<table>
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<th>Test Result Name</th>
<th>Result LOINC Value</th>
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<tbody>
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<td>21702</td>
<td>GAD65 Ab Assay, CSF</td>
<td>94359-7</td>
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