Overview

Useful For
Aids in the diagnosis of multiple sclerosis

Profile Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFINC</td>
<td>IgG Index, CSF</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>SFINS</td>
<td>IgG, S</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Method Name
Nephelometry

NY State Available
Yes

Specimen

Specimen Type
CSF
Serum

Specimen Required
Both serum and spinal fluid are required. Spinal fluid must be obtained within 1 week of serum draw.

Specimen Type: Serum

Container/Tube: Red top or serum gel

Specimen Volume: 1 mL

Collection Instructions: Label specimen as serum.

Specimen Type: Spinal fluid

Container/Tube: Sterile vial

Specimen Volume: 1 mL

Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume
Serum, Spinal Fluid: 0.5 mL

Reject Due To
Gross hemolysis | OK
---|---
Gross lipemia | Reject
Gross icterus | OK
Criteria apply to serum specimens only. For CSF specimens, the criteria do not apply.

### 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>14 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td>Serum</td>
<td>Refrigerated (preferred)</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>14 days</td>
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</tbody>
</table>

### Clinical and Interpretive

#### Clinical Information

Elevation of IgG levels in the cerebrospinal fluid (CSF) of patients with inflammatory diseases of the central nervous system (multiple sclerosis [MS], neurosyphilis, acute inflammatory polyradiculoneuropathy, subacute sclerosing panencephalitis) is due to local central nervous system (CNS) synthesis of IgG.

The 2 most commonly used diagnostic laboratory tests for MS are CSF index and oligoclonal banding. The CSF index is the CSF IgG to CSF albumin ratio compared to the serum IgG to serum albumin ratio. The CSF index is, therefore, an indicator of the relative amount of CSF IgG compared to serum. Any increase in the index is a reflection of IgG production in the CNS. The IgG synthesis rate is a mathematical manipulation of the CSF index data and can also be used as a marker for CNS inflammatory diseases.

#### Reference Values

**CSF index:** 0.00-0.85

**CSF IgG:** 0.0-8.1 mg/dL

**CSF albumin:** 0.0-27.0 mg/dL

**Serum IgG**

- 0-4 months: 100-334 mg/dL
- 5-8 months: 164-588 mg/dL
- 9-14 months: 246-904 mg/dL
- 15-23 months: 313-1,170 mg/dL
2-3 years: 295-1,156 mg/dL
4-6 years: 386-1,470 mg/dL
7-9 years: 462-1,682 mg/dL
10-12 years: 503-1,719 mg/dL
13-15 years: 509-1,580 mg/dL
16-17 years: 487-1,327 mg/dL
> or =18 years: 767-1,590 mg/dL

Serum albumin: 3,200-4,800 mg/dL
CSF IgG/albumin: 0.00-0.21
Serum IgG/albumin: 0.0-0.4

CSF IgG synthesis rate: 0-12 mg/24 hours

**Interpretation**

Cerebrospinal fluid (CSF) IgG index is positive (elevated) in approximately 80% of patients with multiple sclerosis (MS). Oligoclonal banding in CSF is also positive in approximately 80% of patients with MS. The use of CSF index plus oligoclonal banding has been reported to increase the sensitivity to over 90%.

The index is independent of the activity of the demyelinating process.

**Cautions**

The cerebrospinal fluid index can be elevated in other inflammatory demyelinating diseases such as neurosyphilis, acute inflammatory polyradiculoneuropathy, and subacute sclerosing panencephalitis.

**Clinical Reference**


**Performance**
Method Description
The cerebrospinal fluid (CSF) and serum IgG and albumin are determined by immunonephelometry on a Siemens Nephelometer II. The CSF IgG index and synthesis rate are calculated and reported. In addition, the serum IgG and albumin, CSF IgG and albumin, and serum and CSF IgG/albumin ratios are reported. (Instruction manual: Siemens Nephelometer II Operations. Siemens, Inc., Newark, DE. May 2005)

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Friday; 2 p.m.

Analytic Time
Same day/1 day

Maximum Laboratory Time
2 days

Specimen Retention Time
2 weeks

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 has been cleared, approved or is exempt by the U.S. Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information
82040
82042
82784 x 2

LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<tbody>
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<td>SFIN</td>
<td>Cerebrospinal Fl, CSF, IgG Index</td>
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<td>Result ID</td>
<td>Test Result Name</td>
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