**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**
Test Definition: SFIN
Cerebrospinal Fl, CSF, IgG Index

<table>
<thead>
<tr>
<th>CSF:</th>
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<tbody>
<tr>
<td>Lipemia</td>
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<tr>
<td>NA</td>
</tr>
<tr>
<td>Lipemia</td>
</tr>
<tr>
<td>Mild OK; Gross reject</td>
</tr>
<tr>
<td>Icterus</td>
</tr>
<tr>
<td>Mild OK; Gross OK</td>
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<tr>
<td>Other</td>
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Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
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<tbody>
<tr>
<td>CSF</td>
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<td>14 days</td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>14 days</td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>14 days</td>
</tr>
<tr>
<td>Serum</td>
<td>Refrigerated (preferred)</td>
<td>14 days</td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>14 days</td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>14 days</td>
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</tbody>
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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
Test Definition: SFIN
Cerebrospinal Fl, CSF, IgG Index

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 Saturday; 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 or approved 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

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<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<td>SFIN</td>
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<td>Test Result Name</td>
<td>Result LOINC Value</td>
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