Overview

Useful For
Aiding in the diagnosis of multiple sclerosis and other central nervous system inflammatory conditions

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>SFIGS</td>
<td>IgG, S</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>ALBS1</td>
<td>Albumin, S</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Method Name
SFINC, SFIGS: Nephelometry
ALBS1: Photometric

NY State Available
Yes

Specimen

Specimen Type
CSF
Serum

Specimen Required
Both serum and spinal fluid are required. Spinal fluid must be obtained within 7 days of serum collection.
2 individual serum samples are required.

Collection Container/Tube:
Preferred: Serum gel
Acceptable: Red top

Submission Container/Tube: 2 Plastic vials

Specimen Volume: 2 mL in 2 plastic vials, each containing 1 mL

Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Type: Spinal fluid

Container/Tube: Sterile vial

Specimen Volume: 1 mL

Collection Instructions: Label specimen as SFINC.

Reject Due To

- Gross hemolysis: Reject
- Gross lipemia: Reject
- Gross icterus: OK
Criteria apply to serum specimens only. For CSF specimens, the criteria are not applicable.

**Specimen Minimum Volume**
Serum 1 mL in 2 plastic vials, each containing 0.5 mL
Spinal fluid: 0.5 mL

**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>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>Frozen</td>
<td>28 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
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</tbody>
</table>

**Clinical & Interpretive**

**Clinical Information**
Elevation of IgG in the cerebrospinal fluid (CSF) of patients with inflammatory diseases of the central nervous system (CNS) such as multiple sclerosis (MS), neurosyphilis, acute inflammatory polyradiculoneuropathy, subacute sclerosing panencephalitis may be due to local (intrathecal) synthesis of IgG.

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. The test is commonly ordered with oligoclonal banding or immunoglobulin kappa free light chains in CSF to aid in the diagnosis of demyelinating conditions.

**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
Test Definition: SFIG
CSF IgG Index Profile

> or =12 months: 3,500-5,000 mg/dL
Reference values have not been established for patients who are <12 months of age.
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 synthesis rate indicates the rate of increase in the daily CSF production of IgG in milligrams per day. A result greater than 12 mg/24h is elevated.
A CSF index greater than 0.85 is elevated and indicative of increased synthesis of IgG.

**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**
CSF IgG and albumin, and Serum IgG:
The cerebrospinal fluid (CSF) IgG and albumin, and serum IgG are determined by immunonephelometry. The CSF IgG index and synthesis rate are calculated and reported.(Instruction manual: Siemens BN II Nephelometer Operations.
Siemens, Inc.; Version 2.3, 2008; Addendum to the Instruction Manual 2.3, 08/2017)
Serum albumin:
The dye, bromcresol green (BCG), is added to serum in an acid buffer. The color intensity of the blue-green albumin-BCG complex is directly proportional to the albumin concentration and is determined photometrically.(Package insert: Roche Albumin reagent. Roche Diagnostics; 03/2015)

**PDF Report**
No
Specimen Retention Time
See Individual Test IDs

Performing Laboratory Location
Rochester

Fees & Codes

Test Classification
This test has been cleared, approved, or is exempt by the US 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