Overview

Useful For
Detecting meningeal carcinomatosis and intradural or extradural infiltration

Differentiating brain parenchymal metastasis from adenocarcinoma or squamous-cell carcinoma

Method Name
Immunoenzymatic Assay

NY State Available
Yes

Specimen

Specimen Type
CSF

Specimen Required
Collection Container/Tube: Sterile vial

Submission Container/Tube: 13 x 75-mm tube

Specimen Volume: 0.5 mL

Forms
If not ordering electronically, complete, print, and send an Oncology Test Request (T729) with the specimen.

Specimen Minimum Volume
0.4 mL

Reject Due To
No specimen should be rejected

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>Frozen</td>
<td>90 days</td>
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</tbody>
</table>

Clinical and Interpretive

Clinical Information
Carcinoembryonic antigen (CEA) normally is present in cerebrospinal fluid (CSF) in very low concentrations. Elevations in serum CEA can cause passive transfer to CSF. Tumors of the brain, especially metastatic tumors, can elevate CSF CEA.
Reference Values
<0.6 ng/mL

Tumor markers are not specific for malignancy, and values may vary by method.

Interpretation
Increased values are seen in approximately 60% of patients with meningeal carcinomatosis.

Cautions
Although the assay appears to be specific for adenocarcinoma and squamous cell carcinoma, increased carcinoembryonic antigen (CEA) values in cerebrospinal fluid (CSF) are not seen in all patients with such tumors of the brain.

Mildly elevated CEA values in CSF may be secondary to passive transfer from the serum in individuals with high serum CEA concentrations.

Some patients who have been exposed to animal antigens, either in the environment or as part of treatment or imaging procedure, may have circulating antianimal antibodies present. These antibodies may interfere with the assay reagents to produce unreliable results.

Clinical Reference

Performance

Method Description
Instrument used is Beckman Coulter Unicel DXI 800. The Access carcinoembryonic antigen (CEA) assay is a 2-site immunoenzymatic sandwich assay using 2 mouse monoclonal anti-CEA antibodies (MAb) that react with different epitopes of CEA. A sample is added to a reaction vessel, along with the first anti-CEA MAb-alkaline phosphatase conjugate and the second anti-CEA MAb bound to paramagnetic particles. The incubation is followed by a magnetic separation and washing. The chemiluminescent substrate Lumi-Phos 530 is added to the vessel and light generated by the reaction is measured with a luminometer. The light production is proportional to the concentration of CEA in the sample. The amount of analyte in the sample is determined by means of a stored, multipoint calibrator curve.(Package insert: Beckman Coulter Ireland Inc, Ireland, 2005)

PDF Report
No
Test Definition: CEASF
Carcinoembryonic Ag (CEA), CSF

Day(s) and Time(s) Test Performed
Monday through Friday; 5 a.m.-12 a.m.,
Saturday; 6 a.m.-6 p.m.

Analytic Time
Same day/1 day

Maximum Laboratory Time
3 days

Specimen Retention Time
90 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 has been modified from the manufacturer's instructions. Its performance characteristics were 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
82378

LOINC® Information

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<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<td>CEASF</td>
<td>Carcinoembryonic Ag (CEA), CSF</td>
<td>2037-0</td>
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</table>

<table>
<thead>
<tr>
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<th>Test Result Name</th>
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<tbody>
<tr>
<td>CEASF</td>
<td>Carcinoembryonic Ag (CEA), CSF</td>
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