**Overview**

**Useful For**
Definitive identification of amyloid proteins

**Reflex Tests**

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLCPC</td>
<td>Microdissection, Laser Capture</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>MSPTC</td>
<td>Mass Spectrometry</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Testing Algorithm**

In all cases with adequate tissue, an initial Congo red stain is performed before mass spectrometry testing to confirm positivity and pattern of amyloid deposition can be considered when interpreting mass spectrometry results. A pathology consultation is typically not required. If the amyloid subtyping results do not fit the clinical findings, a PATHC / Pathology Consultation may be added if appropriate, upon client approval.

See [Laboratory Approach to the Diagnosis of Amyloidosis](#) in Special Instructions.

**Special Instructions**

- [Laboratory Approach to the Diagnosis of Amyloidosis](#)

**Method Name**

Histological Stain

Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

**NY State Available**

Yes

**Specimen**

**Specimen Type**

AMYLOID

**Shipping Instructions**

Attach the green pathology address label included in the kit to the outside of the transport container.

**Necessary Information**

1. Preliminary pathology report and history are required.

2. A brief explanatory note or consultative letter is also recommended.

**Specimen Required**

Supplies: Pathology Packaging Kit (T554)
**Test Definition: AMPIP**
Amyloid Protein ID, Par, LC MS/MS

**Specimen Type:** Formalin-fixed or B5-fixed, paraffin-embedded tissue block

**Container/Tube:** Pathology Packaging Kit (T554)

**Collection Instructions:** Do not send fixed tissue slides. Testing can only be done on paraffin-embedded tissue blocks.

**Forms**
If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:

- **Cardiovascular Test Request** (T724)
- **Hematopathology/Cytogenetics Test Request** (T726)
- **Renal Diagnostics Test Request** (T830)

**Reject Due To**

<table>
<thead>
<tr>
<th>Tissue/Slides</th>
<th>Fixed tissue slides</th>
<th>Wet/Frozen Tissue</th>
<th>Cytological Smears</th>
<th>Nonformalin fixed tissue</th>
<th>Nonparaffin embedded tissue</th>
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**Specimen Stability Information**

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tbody>
<tr>
<td>AMYLOID</td>
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<tr>
<td></td>
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**Clinical and Interpretive**

**Clinical Information**
Amyloidosis is a group of hereditary and acquired diseases that are unified by extracellular tissue deposition of misfolded proteins resulting in end organ damage. Amyloidosis can be a systemic or localized disease. Although many cases of amyloidosis are hereditary, most are acquired as the result of an underlying monoclonal B-cell/plasma cell malignancy, as a phenomenon of aging, or as the result of long-standing chronic inflammation. Specific amyloid-related diseases are therefore associated with specific amyloid proteins. These include kappa or lambda immunoglobulin light chains (AL amyloid), transthyretin (ATTR amyloid), serum amyloid A (SAA amyloid), and other uncommon subtypes. Because treatment of amyloidosis patients differs radically for the different amyloid subtypes, it is critically important to accurately identify the proteins that constitute the amyloid deposits.

The basic diagnosis of amyloidosis is typically achieved by Congo red staining of paraffin-embedded tissue biopsy specimens obtained from diverse anatomic sites and demonstrating Congo red-positive, apple-green birefringent, amyloid deposits in the tissues. The next step is to definitively subtype the amyloid deposits. This test fulfills that need. It relies on laser microdissection of Congo red-positive amyloid deposits followed by analysis by liquid chromatography-tandem mass spectrometry to accurately determine the identity of the proteins that constitute the amyloid.

**Interpretation**
Test Definition: AMPIP
Amyloid Protein ID, Par, LC MS/MS

An interpretation will be provided.

Cautions
No significant cautionary statements.

Clinical Reference


Performance

Method Description
Affected areas are removed from paraffin-embedded tissues by laser microdissection. Protein digestion is performed, followed by liquid chromatography-tandem mass spectrometry.(Unpublished Mayo method)

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Friday

Analytic Time
7-15 days

Specimen Retention Time
Until Reported

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
88313
82542 (if appropriate)
88380 (if appropriate)

LOINC® Information

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<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<td>Amyloid Protein ID, Par, LC MS/MS</td>
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<table>
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<tr>
<td>71186</td>
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