Overview

Useful For
Aids in diagnosis of monoclonal gammopathies when used in conjunction with urine monoclonal studies

Method Name
Only orderable as part of a profile. For more information see MPSS / Monoclonal Protein Study, Serum.

Immunofixation

NY State Available
Yes

Specimen

Specimen Type
Serum

Specimen Required
Only orderable as part of a profile. For more information see MPSS / Monoclonal Protein Study, Serum.

Patient Preparation:
Fasting preferred but not required

Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Specimen Volume:
1 mL

Specimen Minimum Volume
1 mL

Reject Due To

<table>
<thead>
<tr>
<th>Condition</th>
<th>Status</th>
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<tbody>
<tr>
<td>Gross hemolysis</td>
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</tr>
<tr>
<td>Gross lipemia</td>
<td>OK</td>
</tr>
<tr>
<td>Gross icterus</td>
<td>OK</td>
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<tr>
<td>Other</td>
<td>3 freeze/thaw cycles</td>
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Specimen Stability Information

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<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tbody>
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<td>Ambient</td>
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</tr>
<tr>
<td></td>
<td>Frozen</td>
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Clinical and Interpretive

Clinical Information
Immunotyping of monoclonal (M-) proteins identifies the monoclonal immunoglobulin heavy chain type (gamma, alpha, mu, delta or epsilon) and light chain type (kappa or lambda) in serum.

Reference Values
Only orderable as part of a profile. For more information see MPSS / Monoclonal Protein Study, Serum.

No monoclonal protein detected

Interpretation
A characteristic monoclonal band (M-spike) is often found on protein electrophoresis (PEL) in the gamma globulin region and, more rarely, in the beta or alpha-2 regions. The finding of an M-spike, restricted migration, or hypogammaglobulinemic PEL pattern is suggestive of a possible monoclonal protein. Immunofixation electrophoresis (IFE) is performed to identify the immunoglobulin heavy chain and light chain.

Cautions
Protein electrophoresis (PEL) alone is not considered an adequate screen for monoclonal gammopathies.

Very large IgG M-spikes (>4 g/dL) may saturate the protein stain. In these situations, quantitative IgG assays more accurately determine M-spike concentrations for monitoring disease progression or response to therapy.

Although the PEL M-spike is the recommended method of monitoring monoclonal gammopathies, IgA and IgM proteins that are contained in the beta fraction may be more accurately monitored by quantitative immunoglobulins.

Fibrinogen will migrate as a distinct band in the beta-gamma fraction but will be negative on immunofixation electrophoresis.

Hemolysis may augment the beta fraction.

Penicillin may split the albumin band.

Radiographic agents may produce an uninterpretable pattern.

Clinical Reference

Performance

Method Description
Immunofixation is performed with Sebia reagent sets and are specific for gamma, alpha, mu, kappa, and lambda immunoglobulin heavy and light chains. (Katzmann JA, Kyle RA: Chapter 10: Immunochemical characterization of immunoglobulins in serum, urine, and cerebrospinal fluid. In Manual of Molecular and Clinical Laboratory Immunology. Seventh edition. Edited by B Detrick, RG Hamilton, JD Folds. Washington DC. ASM Press, 2006, pp
PDF Report
No

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

Maximum Laboratory Time
3 days

Specimen Retention Time
14 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 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
86334

LOINC® Information

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