MAYO CLINIC
Mayo Medical Laboratories

NEW TEST
NOTIFICATION DATE: July 24, 2018
EFFECTIVE DATE: Immediately

PROTEIN ELECTROPHORESIS AND ISOTYPE, SERUM
Test ID: SPISO

USEFUL FOR: Diagnosis of monoclonal gammopathies, when used in conjunction with locally performed serum free light chain studies (performed at client site)

PROFILE INFORMATION:

Test ID	Reporting Name	Available Separately	Always Performed
TPE	Total Protein	Yes (Order TP)	Yes
SPE	Protein Electrophoresis	No	Yes
MPTS	M-protein Isotype MALDI-TOF MS, S	No	Yes

REFLEX TESTS:

Test ID	Reporting Name	Available Separately	Always Performed
IMFX	Immunofixation	Yes (Order IMFXO)	No

TESTING ALGORITHM:
This test includes total protein, serum protein electrophoresis, and heavy and light chain typing (kappa and lambda).

If a light chain is identified without a corresponding heavy chain during initial testing, immunofixation with IgD and IgE antisera will be performed at an additional charge.

METHOD:
TPE: Biuret
SPE: Agarose Gel Electrophoresis
MPTS: Matrix-Assisted Laser Desorption/Ionization-Time of Flight Mass Spectrometry (MALDI-TOF MS)

REFERENCE VALUES:
TOTAL PROTEIN
> or =1 year: 6.3-7.9 g/dL
Reference values have not been established for patients that are <12 months of age.

PROTEIN ELECTROPHORESIS
Albumin: 3.4-4.7 g/dL
Alpha-1-globulin: 0.1-0.3 g/dL
Alpha-2-globulin: 0.6-1.0 g/dL
Beta-globulin: 0.7-1.2 g/dL
Gamma-globulin: 0.6-1.6 g/dL
An interpretive comment is provided with the report.
Reference values have not been established for patients that are <16 years of age.

M-PROTEIN ISOTYPE MALDI-TOF MS, S
No monoclonal protein detected

SPECIMEN REQUIREMENTS:
Patient Preparation: Fasting (12 hour) preferred but not required

Container/Tube:
Preferred: Serum gel
Acceptable: Red top
Specimen Volume: 1 mL
Minimum Volume: 0.6mL

SPECIMEN STABILITY INFORMATION:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CAUTIONS:
Very large IgG M-spikes (>4 g/dL) may saturate the protein stain. In these situations, quantitative IgG assays (IGG / Immunoglobulin G [IgG], Serum) should be performed to accurately determine M-spike concentrations to monitor disease progression or response to therapy.

Fibrinogen will migrate as a distinct band in the beta-gamma fraction. Serum specimens from new patients with a beta-gamma band are to be treated with thrombin to ensure complete conversion of fibrinogen.

Hemolysis may augment the beta fraction.

Penicillin may split the albumin band.

Radiographic agents may produce an uninterpretable pattern.

CPT CODE:
84155
84165
84999
86334 (if appropriate)

DAY(S) SET UP: Monday through Saturday; 2 p.m.

ANALYTIC TIME: Same day/1 day

QUESTIONS: Contact your Mayo Medical Laboratories' Regional Manager or
Amy Ennis, MML Laboratory Technologist Resource Coordinator
Telephone: 800-533-1710