

## Monoclonal Protein Screen, Random, Urine

**Test ID:** RSMPU

### Useful for:

Identifying monoclonal gammopathies using random urine specimens

### Ordering Guidance:

The use of a random urine specimen is sufficient for identifying the presence or absence of monoclonal proteins, but a 24-hour specimen is preferred for quantitating and monitoring the abnormality. See SMPU / Monoclonal Protein Screen, 24 Hour, Urine.

### Profile Information:

Test ID	Reporting Name	Available Separately	Always Performed
MPTRU	M-protein Mass-Fix, Random, U	No	Yes
RPTU2	Protein/Creatinine Ratio, Random, U	Yes (RPTU1)	Yes

### Reflex Tests:

Test ID	Reporting Name	Available Separately	Always Performed
RPEU	Protein Electrophoresis, Random, U	No	No

### Testing Algorithm:

Urine M-protein mass-fix alone is not considered adequate screening for monoclonal gammopathies.

The laboratory will evaluate the urine for M-proteins with the mass-fix method, and if positive for M-protein, protein electrophoresis will be performed at an additional charge.

The following algorithms are available:

[-Amyloidosis: Laboratory Approach to Diagnosis](#)

[-Multiple Myeloma: Laboratory Screening](#)

### Methods:

RPTU2: Turbidimetry/Enzymatic Colorimetric Assay

RPEU: Agarose Gel Electrophoresis

MPTRU: Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF MS)

### Reference Values:

**CREATININE:**

> or =18 years old: 16-326 mg/dL

Reference values have not been established for patients younger than 18 years of age.

**PROTEIN/CREATININE RATIO:**

> or =18 years: <0.18 mg/mg creatinine

Reference values have not been established for patients younger than 18 years of age.

**ELECTROPHORESIS, PROTEIN**

The following fractions, if present, will be reported as mg/dL:

-Albumin

-Alpha-1-globulin

-Alpha-2-globulin

-Beta-globulin

-Gamma-globulin

No reference values apply to random urines.

**MASS-FIX M-PROTEIN ISOTYPE**

M-protein Isotype MS:

No monoclonal protein detected

Flag M-protein Isotype MS:

Negative

**Specimen Requirements:**

**Supplies:** Urine Container, 60 mL (T313)

**Submission Container/Tube:** Plastic, 60-mL urine bottle

**Specimen Volume:** 50 mL

**Minimum Volume:** 30 mL

**Collection Instructions:**

1. Collect random urine specimen.
2. Aliquot between 30 mL and 50 mL of urine into a plastic, 60 mL urine bottle.

**Specimen Stability Information:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Ambient	24 hours
	Frozen	5 days

**Cautions:**

Monoclonal gammopathies are rarely seen in patients younger than 30 years of age.

Hemolysis may cause a discrete band on protein electrophoresis, which will be negative on isotyping.

Penicillin may split the albumin band.

Radiographic agents may produce an uninterpretable pattern.

**CPT Code:**

84156

82570

84166 Electrophoresis, protein (if appropriate)

0077U

**Day(s) Performed:** Monday through Friday

**Report Available:** 4 to 6 days

**Questions**

Contact Amy Ennis, Laboratory Resource Coordinator at 800-533-1710.