

Overview**Useful For**

Assessing muscle damage from any cause

Method Name

Latex Particle-Enhanced Immunoturbidometric Assay

NY State Available

Yes

Specimen**Specimen Type**

Serum

Specimen Required**Collection Container/Tube:**

Preferred: Serum gel

Acceptable: Red top

Submission Container/Tube: Plastic vial

Specimen Volume: 1 mL

Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume

0.5 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Gross icterus	Reject

Specimen Stability Information

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

Clinical and Interpretive

Clinical Information

Myoglobin is a heme protein found in smooth and skeletal muscles. Serum myoglobin reflects a balance between intravascular release of myoglobin from muscle and renal clearance.

Previously serum myoglobin had been advocated as a sensitive marker for early acute myocardial injury (eg, acute myocardial infarction: AMI). However, more recent studies indicate that other newer markers (eg, troponin) provide superior diagnostic utility in detecting early myocardial injury.

Elevation of serum myoglobin may occur as a result of muscle trauma, resuscitation, myopathies, AMI, shock, strenuous body activity, or decreased elimination during renal insufficiency. Extreme elevations occur in rhabdomyolysis.

Reference Values

< or =90 mcg/L

Interpretation

Elevated myoglobin levels are seen in conditions of acute muscle injury.

Cautions

Elevation is nonspecific for acute myocardial infarction. The test is of no value in this regard in the presence of renal failure, rhabdomyolysis, extensive trauma, acute peripheral vascular occlusion, or after seizures.

Serum levels rise in renal insufficiency.

In very rare cases, gammopathy, in particular type IgM (Waldenstrom macroglobulinemia), may cause unreliable results.

Results are unreliable in lipemic serum; specimens that cannot be cleared by ultracentrifugation will be rejected.

Clinical Reference

1. Lamb EJ, Jones GRD: Kidney functions tests. In: Rifai N, Horvath AR, Wittwer CT, eds. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 6th ed. Elsevier; 2018:489
2. Capenllini MD, Lo SF, Swinkels DW. Hemoglobin, iron, bilirubin. In: Rifai N, Horvath AR, Wittwer CT, eds. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 6th ed. Elsevier; 2018:747
3. Varki AP, Roby DS, Watts H, Zatuschni J: Serum myoglobin in acute myocardial infarction: a clinical study and review of the literature. Am Heart J. 1978;96:680-688
4. Kallner A, Sylven C, Brodin U, et al: Early diagnosis of acute myocardial infarction. A comparison between chemical predictors. Scand J Clin Lab Invest. 1989;49:633-639

Performance

Method Description

Particle-enhanced immunoturbidimetric assay. Latex-bound antimyoglobin antibodies react with antigen in the sample to form an antigen/antibody complex that after agglutination can be determined turbidimetrically. (Package insert: Tina-quant Myoglobin Gen 2. Roche Diagnostics; V9.0. 01/2017)

PDF Report

No

Day(s) Performed

Monday through Sunday

Report Available

1 to 2 days

Specimen Retention Time

7 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, approved or is exempt 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

83874

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
MYGLS	Myoglobin, S	2639-3

Result ID	Test Result Name	Result LOINC Value
MYGLS	Myoglobin, S	2639-3