
Lab Dept: Point of Care Testing

Test Name: TROPONIN I LEVEL

General Information

Lab Order Codes: PTROP

Synonyms: Point of Care Cardiac Troponin I

CPT Codes: 84484 – Troponin, quantitative

Test Includes: Troponin I level reported in ng/mL.

Logistics

Test Indications: Troponin (cTnI) is detectable 4 - 6 hours after AMI (Acute Myocardial Infarction) with peak levels occurring at approximately 12 hours and return to normal in 3-10 days. Troponin offers the following advantages over CK-MB:

Increased cardiac specificity; avoids clinical interference from skeletal muscle damage and renal insufficiency.

Provides a tool for late presenting patients and for perioperative and postoperative patients at risk for AMI; is comparable in cost.

Troponin testing utilizing the iSTAT will be used as a diagnostic test to look for acute changes over time (0,6 hours) as well as chronic elevations. The iSTAT cTnI method is not as analytically sensitive as some laboratory instrumentation and may have a false negative rate of 15% at initial draw (time 0). At 6 hours, the negative predictive value is 99% and the sensitivity of the assay increases to over 90%. Therefore, if there is sufficient clinical suspicion to obtain cTnI, a second level at 6 hours is strongly recommended. A physician override will be required in order to cancel the 6-hour level.

Lab Testing Sections: Point of Care Testing – **Run on the iSTAT Analyzer by Trained Respiratory Therapy Staff only**

Phone Numbers: Inpatient Units: Respiratory Therapy staff will receive notification of the test upon order.

Clinics, Outpatient services and other non-inpatient units: Call the **LEAD RT** number after ordering the test to alert them of the impending test needing to be run.

Minneapolis Lead RT: 612-813-8250

St. Paul Lead RT: 651-220-8480

| | |
|------------------------------|--|
| Test Availability: | Daily, 24 hours |
| Turnaround Time: | Testing takes 10 minutes to complete on the iSTAT analyzer. Results are immediately available from the instrument upon completion and sent via interface to the patient's EMR. |
| Special Instructions: | N/A |

Specimen

| | |
|-----------------------------|--|
| Specimen Type: | Whole Blood |
| Container: | Plain plastic syringe or heparinized blood gas syringe labeled for assays to be performed. |
| Draw Volume: | Varies based on specimen type & container. See specific instructions under Collection below. Sample minimum in a syringe: 0.2 mL. |
| Analyzer Volume: | Analyzer volume: 65-95 uL (microliters) whole blood for any cartridge type |
| Collection: | <p>Fresh whole blood collected in a plain plastic syringe or in a heparinized blood gas syringe labeled for the assays to be performed and labeled with proper patient ID. Capillary samples are NOT recommended for Troponin I testing.</p> <p>For cartridge testing of blood gases, electrolytes, chemistries, hematocrit and Troponin I, fill a plain syringe or fill a blood gas syringe (containing balanced heparin), labeled for the assays to be performed. Always use a syringe containing balanced heparin if possible to prevent clotting.</p> <p>Test any samples collected without anticoagulant immediately. Test samples drawn for lactate immediately. Test samples for pH, pCO₂, TCO₂, ionized calcium, and Troponin I within 10 minutes of sample draw. If not tested immediately, remix the sample before testing and discard the first two drops of blood from a syringe before testing.</p> |
| Special Processing: | N/A |
| Patient Preparation: | None |
| Sample Rejection: | Hemolysis; evidence of clotting; mislabeled or unlabeled specimens |

Interpretive

| | | |
|-------------------------|-------------------|-----------------------------------|
| Reference Range: | 0.00 – 0.08 ng/mL | Normal, healthy adult individuals |
|-------------------------|-------------------|-----------------------------------|

Note: Because no pediatric reference range data is published, the adult reference range of 0.00-0.08 ng/mL will be utilized as this represents 99% of healthy adults.

Critical Values: N/A

Limitations: N/A

Methodology: A two-site enzyme-linked immunosorbant assay (ELISA) method is used

References: Abbott Point of Care Cardiac Troponin Technical Bulletin May 2012

Updates:
6/21/2011: Update turnaround time information.
3/5/2012: Test changed from Troponin T to Troponin I. Troponin T is no longer available.
3/15/2012: Tube type changed from red top to green top.
6/6/2013: Test moved from referral to ANW to internal POCT test.