
Lab Dept: Coagulation

Test Name: CHROMOGENIC FACTOR IX ACTIVITY

General Information

Lab Order Codes: CH9

Synonyms: Factor 9 Chromogenic; Factor IX Chromogenic; Chromogenic FIX

CPT Codes: 85130 – Chromogenic substrate assay

Test Includes: Chromogenic factor IX activity

Logistics

Test indications: Useful for monitoring coagulation factor replacement therapy of selected extended half-life coagulation factor replacements and aids in the diagnosis of hemophilia B using a 2-stage assay, especially when a 1-stage assay was normal.

Lab Testing Sections: Coagulation - Sendouts

Referred to: Mayo Clinic Laboratories (MML test code: CH9)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily

Turnaround Time: 1 to 3 days – Test performed Monday-Friday

Special Instructions: Must be processed and plasma frozen within 4 hours of collection.

Specimen

Specimen Type: Whole blood

Container: Light Blue top (Buffered Na Citrate 3.2%) tube

Draw Volume: 1.8 mL blood (in 2 mL tube) or 2.7 mL blood (in a 3 mL tube)

Processed Volume: 1 mL (0.5 mL minimum) platelet-poor plasma

Collection:

- A clean venipuncture is essential, avoid foaming
- Entire sample must be collected with single collection, pooling of sample is unacceptable.
- Capillary collection is unacceptable.
- Patient's with a hematocrit level >55% must have a special tube made to adjust for the hematocrit; contact lab for a special tube.
- Mix thoroughly by gentle inversion. Deliver immediately to the laboratory at room temperature via courier or pneumatic tube. Off campus collections:
- Do not refrigerate.
- If not received in our lab within 4 hours of collection, sample must be centrifuged and "platelet-poor plasma removed from cells and transferred to an aliquot tube being careful not to distribute to disturb the cell layer. Centrifuge the plasma a second time and transfer into a clean aliquot tube being careful not to include any residual platelets on the bottom of the tube. Freeze at -20°C and deliver to the lab on dry ice.

*Validation of your lab's centrifuge for platelet poor plasma is required.

Special Processing:

Lab Staff: Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. Aliquot plasma into a separate plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, at -40°C or below.

Additional Information:

1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.
2. Each coagulation assay requested should have its own vial.

Specimen stable frozen for 14 days.

Patient Preparation:

n/a

Sample Rejection:

Unlabeled or mislabeled specimens; specimens collected in incorrect anticoagulant; specimens not processed and frozen within 4 hours of collection.

Interpretive**Reference Range:**

65-140%

Chromogenic factor IX activity generally correlates with the one-stage FIX activity. In full term/premature neonates, infants, children, and adolescents the one-stage FIX activity is similar to adults. However, no similar data for chromogenic FIX activity are available.

Critical Values: n/a

Limitations: Excess heparin and dilution contamination due to improper specimen collection through an intravenous access device may result in artifactually decreased results.

The one-stage and chromogenic factor IX (FIX) assay results should correlate in the normal population but may be discordant in the hemophilia population and when measuring factor replacement, especially with PEGylated recombinant FIX products.

Methodology: Chromogenic

References: [Mayo Clinic Laboratories](#) March 2025

Updates: 3/5/2025: Initial entry