MAYO CLINIC LABORATORIES

Test Definition: UNHB

Hemoglobin Stability, Blood

Overview

Useful For
Work-up of congenital hemolytic anemias

Method Name
Only orderable as part of a profile or as a reflex. For more information see:
-HAEV1 / Hemolytic Anemia Evaluation, Blood
-HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood
-THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum
-REVE2 / Erythrocytosis Evaluation, Blood
-MEV1 / Methemoglobinemia Evaluation, Blood

Isopropanol and Heat Stability

NY State Available
Yes

Specimen

Specimen Type
Whole Blood EDTA

Specimen Required
Only orderable as part of a profile or as a reflex. For more information see:
-HAEV1 / Hemolytic Anemia Evaluation, Blood
-HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood
-THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum
-REVE2 / Erythrocytosis Evaluation, Blood
-MEV1 / Methemoglobinemia Evaluation, Blood

Container/Tube: Lavender top (EDTA)
Specimen Volume: 4 mL

Specimen Minimum Volume
1 mL

Reject Due To

Gross hemolysis	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

Clinical & Interpretive

Clinical Information

Unstable hemoglobin disease is rare and may be caused by any one of a large number of hemoglobin variants. They are inherited as autosomal dominant traits. The severity of the disease varies according to the hemoglobin variant; there may be no clinical symptoms, or the disease may produce a mild, moderate, or severe hemolytic anemia.

The stained peripheral blood smear shows anisocytosis, poikilocytosis, basophilic stippling, polychromasia and, sometimes, hypochromia. The reticulocyte count may be increased. Splenomegaly and Heinz bodies may also be present.

Reference Values

Only orderable as part of a profile or as a reflex. For more information see:
-HAEV1 / Hemolytic Anemia Evaluation, Blood
-HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood
-THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum
-REVE2 / Erythrocytosis Evaluation, Blood
-MEV1 / Methemoglobinemia Evaluation, Blood

Normal (reported as normal [stable] or abnormal [unstable])

Interpretation

An abnormal or unstable result is indicative of a hemoglobin variant present. Other confirmatory tests should be performed to identify the hemoglobinopathy (HBEL1 / Hemoglobin Electrophoresis Cascade, Blood).

Cautions

False-positive results will be obtained in blood specimens containing greater than 5% fetal hemoglobin or in specimens greater than 1 week old.

Clinical Reference

1. Hoyer JD, Hoffman DR. The thalassemia and hemoglobinopathy syndromes. In: McClatchey KD, Amin HM, Curry JL, eds. Clinical Laboratory Medicine. 2nd ed. Lippincott Williams and Wilkins; 2002:866-895
2. Benz EJ, Ebert BL. Hemoglobin variants associated with hemolytic anemia, altered oxygen affinity, and methemoglobinemias. In: Hoffman R, Benz EJ, Silberstein LE, et al. eds. Hematology: Basic Principles and Practice. 7th ed. Elsevier; 2018:608-615

Performance

Method Description

Unstable hemoglobins precipitate in dilute solutions of isopropanol. Washed erythrocytes are hemolyzed and cleared by centrifugation. Isopropanol is added. The hemolysate is incubated at 37 degrees C for 20 minutes and examined for turbidity. There is no turbidity with normal hemoglobins.(Schmidt RM: Laboratory diagnosis of hemoglobinopathies. In: Bick RL ed. Hematology Clinical and Laboratory Practice. Mosby-Year Book Inc; 1993:327-389; Greene DN, Vaughn CP, Crews BO, Agarwal AM. Advances in the detection of hemoglobinopathies. Clin Chim Acta. 2015;439:50-57)

PDF Report

No

Day(s) Performed

Monday through Friday

Report Available

1 to 4 days

Specimen Retention Time

30 days

Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Main Campus

Fees & 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 account representative. For assistance, contact Customer Service.

Test Classification

This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information

83068

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
UNHB	Hb Stability, B	4639-1

Result ID	Test Result Name	Result LOINC® Value
9095	Hb Stability, B	4639-1