

HOTLINE: Effective August 17, 2020

New Test **3002644** **Hemoglobin (Hb) A₂ and F by Column with Reflex to Electrophoresis** **HB A2F COL**

Methodology: High Performance Liquid Chromatography/Electrophoresis
Performed: Sun-Sat
Reported: 1-4 days

Specimen Required: Collect: Lavender (EDTA) or pink (K₂EDTA).
Specimen Preparation: Transport 5 mL whole blood. (Min: 0.2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Frozen or room temperature specimens.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval:

Age-Defined Normal Hemoglobin Reference Intervals

Age	Hb A ₂ Percent	Hb F Percent
0-1 month	0.0-1.4	45.8-91.7
2 months	0.0-2.0	32.7-85.2
3 months	0.1-2.6	14.5-73.7
4 months	0.8-3.0	4.2-56.9
5 months	1.5-3.3	1.0-38.1
6-8 months	1.8-3.5	0.9-19.4
9-12 months	1.9-3.5	0.6-11.6
13-23 months	1.9-3.5	0.0-8.5
2 years and older	2.0-3.5	0.0-2.1

Interpretive Data:

In laboratory testing to confirm a diagnosis of a β-thalassemia trait diagnosis, Hb A₂ levels should be considered in conjunction with family history and additional laboratory data, including serum iron and iron binding capacity, red cell morphology, hemoglobin, hematocrit, and mean corpuscular volume (MCV).

Patients with a combination of iron deficiency and β-thalassemia may have a normal A₂ level. In these cases, elevated A₂ level cannot be used to screen for β-thalassemia in these cases.

Patient State	Hb A ₂ Level	Hb F Level
Heterozygous β-thalassemia	4-9%	1-5%
Homozygous β-thalassemia	Normal or Increased	80-100%
Heterozygous HPPH	Less than 1.5%	10-20%
Homozygous HPPH	Absent	100%

Note: Recommend quantitation of hemoglobin for definitive diagnosis after 1 year of age. If abnormal peaks suggestive of a hemoglobin variant are detected, then Capillary Electrophoresis will be added to aid in confirmation and identification of the variant. Additional charges apply

CPT Code(s): 83021; if reflexed, add 83020

New York DOH Approved.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.