TEST CHANGE

RBC Band 3 Protein Reduction in Hereditary Spherocytosis

2008460, RBC BAND3

Specimen Requirements:	
Patient Preparation:	
Collect:	Lavender (EDTA) or green (sodium or lithium heparin). ~~Include a Wright stained slide.~~
Specimen Preparation:	Transport 4 mL whole blood in the original container. (Min: 0.5 mL)
Transport Temperature:	Refrigerated.
Unacceptable Conditions:	Clotted or hemolyzed specimens. Specimens older than 7 days.
Remarks:	Specimens must be analyzed within 7 days of collection.
Stability:	Ambient: 3 days; Refrigerated: 7 days; Frozen: Unacceptable
Methodology:	Qualitative Flow Cytometry
Performed:	Sun-Sat
Reported:	1-3 days
Note:	
CPT Codes:	88184
New York DOH Approval Status:	This test is New York DOH approved.

Interpretive Data:

This test can be used to confirm a suspected diagnosis of hereditary spherocytosis (HS). HS is a common inherited hemolytic anemia characterized by the presence of spherical erythrocytes (spherocytes). HS is diagnosed based on family history and clinical features, along with clinical laboratory tests, including peripheral smear examination, osmotic fragility (OF), flow cytometry, or by genetic testing (Hereditary Hemolytic Anemia Panel Sequencing, ARUP test code 2012052).

Band 3 (or solute carrier family 4 member 1, SLC4A1) is the most abundant transmembrane protein found in human red blood cells (RBC). Eosin-5-maleimide (EMA) dye binds to band 3 on intact RBC's. A reduction of fluorescence intensity will be seen in hereditary spherocytosis. This test by flow cytometry has been reported to have a sensitivity of 93 percent for a diagnosis of HS. Congenital dyserythropoietic anemia type II, Southeast Asian ovalocytosis and hereditary pyropoikilocytosis are rare disorders that may also show a positive result.

Reference Interval:

Normal