TEST STATUS - NEW TEST

Notification Date: 2/26/2025
Effective Date: 3/5/2025

Test Name: RBC Band 3 Protein Reduction

Test ID: LAB6786

Explanation: This test is a new EPIC orderable for RBC Band 3 Protein Reduction testing sent to ARUP vs Miscellaneous Reference Test.

Useful For: This test is used to confirm diagnosis of hereditary spherocytosis when hemolytic anemia and spherocytes are present.

Methodology: Qualitative Flow Cytometry

Reference Interval: Normal; Borderline; Abnormal

Specimen Requirements:

Specimen Type:	Whole Blood
Alternate Specimen:	N/A
Container/Tube:	Lavender (EDTA) or green (sodium or lithium heparin)
Specimen Preparation:	Transport 4 mL whole blood in the original container.
Specimen Volume:	4 mL (minimum 0.5 mL)
Pediatric Collection:	Same as above
Storage/Transport Temperature:	Refrigerated

Specimen Stability Information:

Specimen Type	Temperature	Time
Whole Blood	Ambient	3 days
Whole Blood	Refrigerated	7 days
Whole Blood	Frozen	Unacceptable

Reasons for Rejection: Improper specimen type; Improper specimen collection including lack of patient identification; Insufficient sample volume; Improper specimen transport or storage; Clotted or hemolyzed specimens and specimens older than 7 days

Recommendations: See the above indications.

CPT Code(s): 88184

Days(s) Performed: Sun-Sat

Report Available: 1-3 days

Note: 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.

Questions: Please get in touch with Vanderbilt Medical Laboratories Customer Service at 615-875-5227 (5-LABS) or 800-551-5227 or visit our website: Home | Vanderbilt Medical Laboratories (vumc.org)