

Client: Example Client ABC123
123 Test Drive
Salt Lake City, UT 84108
UNITED STATES

Physician: Doctor, Example

Patient: Patient, Example

DOB: 8/10/2004
Gender: Female
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
Collection Date: 00/00/0000 00:00

Hemophilia A (F8) 2 Inversions

ARUP test code 2001759

F8 Inv Specimen whole Blood

Hemophilia A (F8) Inversions Interp

Negative

INDICATION FOR TESTING
Carrier Status

RESULT
No pathogenic variants were detected in the F8 gene.

INTERPRETATION
Neither the factor 8 (F8) intron 22-A inversion nor the intron 1 inversion were detected. Thus, this individual's risk of being a carrier of hemophilia A is reduced, but not eliminated. Please refer to the background information included in this report for the clinical sensitivity and limitations of this test.

RECOMMENDATIONS
Medical screening and management should rely on clinical findings and family history. Genetic consultation is recommended. If this individual is at risk for being a carrier of hemophilia A, F8 sequence analysis (ARUP test code 3004241) and F8 deletion/duplication analysis (Deletion/Duplication Analysis by MLPA, ARUP test code 3003144) are recommended. [If indication is carrier screening or unknown add after GC recommendation:] For optimal interpretation of this result, confirmation of the diagnosis and determination of the causative familial variant in an affected family member or obligate carrier is recommended.

COMMENTS
Reference Sequence: GenBank # NM_000132.3

This result has been reviewed and approved by [REDACTED]

H=High, L=Low, *=Abnormal, C=Critical

BACKGROUND INFORMATION: Hemophilia A (F8) 2 Inversions

CHARACTERISTICS: Hemophilia A is characterized by deficiency of factor VIII clotting activity. Less than 1 percent factor VIII activity results in severe deficiency associated with spontaneous joint or deep muscle bleeding. Moderate deficiency (1-5 percent activity) and mild deficiency (6-40 percent activity) are associated with prolonged bleeding after tooth extractions, surgery, or injuries, and recurrent or delayed wound healing. Female carriers of hemophilia A may have increased bleeding tendencies.

EPIDEMIOLOGY: 1 in 5,000 live male births worldwide

CAUSE: Pathogenic F8 germline variants

INHERITANCE: X-linked recessive. In the estimated 30 percent of cases that appear to be de novo, the mother is found to be a carrier at least 80 percent of the time.

PENETRANCE: 100 percent in males. Approximately 30 percent of female carriers have factor VIII activity levels of less than 40 percent and are at risk for bleeding symptoms typically consistent with mild hemophilia A.

CLINICAL SENSITIVITY: 51 percent of variants causing severe hemophilia A are detected by F8 inversion testing. This assay does not detect F8 variants associated with mild or moderate hemophilia A in males.

METHODOLOGY: Intron 22-A and intron 1 inversions detected by inverse PCR and electrophoresis.

ANALYTICAL SENSITIVITY/SPECIFICITY: 99 percent

LIMITATIONS: A negative result does not exclude a diagnosis of or carrier status for hemophilia A. Diagnostic errors can occur due to rare sequence variations. F8 variants, other than the F8 type 1 or type 2 intron 22-A and intron 1 inversions, will not be detected. Rare F8 intron 22-A and intron 1 inversions with different breakpoints may not be detected by this assay.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
F8 Inv Specimen	23-038-402231	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Hemophilia A (F8) Inversions Interp	23-038-402231	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

END OF CHART

H=High, L=Low, *=Abnormal, C=Critical