ARUP LABORATORIES | www.aruplab.com
500 Chipeta Way, Salt Lake City, Utah 84108-1221
phone: (801) 583-2787, toll free: (800) 522-2787
Julio C. Delgado, MD, MS, Director of Laboratories

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

Physician: Doctor, Example

Patient: Patient, Example

DOB	3/18/1997
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: Intron 22 *

RESULT
One pathogenic variant detected in the F8 gene.

DNA VARIANT
Pathogenic
Intron 22-A inversion; Heterozygous

INTERPRETATION
According to information provided to ARUP, this individual's maternal grandfather has hemophilia A and the familial variant was described as the F8 intron 22 inversion. One copy of the pathogenic intron 22-A inversion was detected in the factor 8 (F8) gene; thus, this individual is a carrier of hemophilia A and has a 10 percent risk of being mildly affected. Her offspring have a 50 percent risk of inheriting the variant regardless of sex.

RECOMMENDATIONS
A baseline factor VIII clotting activity assay should be performed to determine if she is at increased risk for bleeding. Genetic consultation is indicated, including a discussion of medical screening and management. Testing for the identified variant in other at-risk family members is recommended (Hemophilia A (F8) 2 Inversions, ARUP test code 2001759).

COMMENTS
Reference Sequence: GenBank # NM_000132.3

This result has been reviewed and approved by Hunter Best, Ph.D.

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

BACKGROUND INFORMATION: Hemophilia A (F8) 2 Inversions

CHARACTERISTICS: Severe deficiency of factor VIII clotting activity leading to spontaneous joint or deep muscle bleeding. Moderate to mild deficiency is associated with prolonged bleeding after tooth extractions, surgery, or injuries and recurrent or delayed wound healing.
INCIDENCE: 1 in 4,000-5,000 live male births worldwide, rare in females.
INHERITANCE: X-linked recessive. Of simplex cases, 85 percent of mothers are carriers and 10-15 percent of boys have a de novo pathogenic variant.
PENETRANCE: 100 percent in males and 10 percent in females.
CAUSE: Pathogenic F8 gene variant.
CLINICAL SENSITIVITY: 51 percent of variants causing 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 AND SPECIFICITY: 99 percent.
LIMITATIONS: Diagnostic errors can occur due to rare sequence variations. F8 variants, other than the F8 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.

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement C: aruplab.com/CS

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
F8 Inv Specimen	18-317-402381	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Hemophilia A (F8) Inversions Interp	18-317-402381	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