

LABORATORY REPORT

Example Client, XYZ123 1234 Warde Road Ann Arbor MI 48108 **EXAMPLE, REPORT W**

WX0000003827 M 07/08/1978 45 Y

Referral Testing

Collected: 08/18/2023 12:45 Received: 08/18/2023 12:45

<u>Test Name</u> <u>Result</u> <u>Flag Ref-Ranges</u> <u>Units</u> <u>Site</u>

von Willebrand Disease Gene Sequencing

vWF Disease Gene Seg SEE NOTE QCRL

RESULT: NEGATIVE

Interpretation: Nucleotide sequence analysis indicates that this individual is negative for clinically significant single nucleotide variants, small insertions and deletions, and larger copy number variants in the analyzed regions (see below) of the von Willebrand Factor (vWF) gene. Benign and likely benign variants/polymorphisms are not reported. This negative result does not rule out a clinical diagnosis of all types of von Willebrand disease. Laboratory results and submitted clinical information reviewed by Yili Xie, Ph.D., FACMG, CGMBS.

von Willebrand disease (VWD) is the most common inherited bleeding disorder, affecting approximately 1% of the general population. It results from quantitative or qualitative defects of the von Willebrand factor (VWF) protein. Pathogenic variants in the VWF gene (located on chromosome 12p13.3) can cause reduced synthesis of VWF protein, or structural and functional abnormalities in the VWF protein, leading to various types of VWD.

In this assay, sheared genomic DNA fragments representing the entire coding region and the splice junction sites of the VWF gene (NM 000552.3) are selectively enriched through exon capture, and then subjected to nucleotide sequence analysis on a massively parallel sequencing platform. To avoid pseudogene interference, long range PCR (LR-PCR) is performed for exons 23-28. The LR-PCR product is processed and included in the sequencing reaction. Exon level, copy number variants are detected by bioinformatic analysis of the sequencing and confirmed by a custom targeted microarray. However, due to the pseudogene, exons 23-28 are excluded from copy number analysis. This analysis will identify variants associated with Type II (subtypes, A, B, M, and N) and some forms of Type I and Type III VWD (see http://www.shef.ac.uk/vwf/vwd.html). Since genetic variation and other factors can affect the accuracy of this test, results should always be interpreted in light of clinical and familial data. Benign and likely benign variants with no known clinical significance are reported only by request.

The classification and interpretation of the variants identified in this DNA assessment reflect the current state of Quest Diagnostics' understanding at the time this report was issued. Variant classification and interpretation are subject to professional judgment, and may change for a variety of reasons, including but not

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, $\,$. - NOT TESTED

F218000049 WX0000003827 Printed D&T: 08/18/23 12:46 Ordered By: KAJAL SITWALA, MD, PhD WX00000000002354



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limited to, improvements in classification techniques, availability of additional information, and observation of a variant in more patients. Health care providers should verify a variant's classification prior to taking any clinical action. This test result should be used in conjunction with the health care provider's clinical evaluation and other medically established means to help with a diagnosis and treatment plan. For questions regarding variant classification updates, please call Quest Diagnostics at 866-GENEINFO (436-3463) to speak to a genetic counselor or laboratory director.

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Nichols Institute San Juan Capistrano. It has not been cleared or approved by FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

Test Performed at: Quest Diagnostics Nichols Institute 33608 Ortega Highway San Juan Capistrano, CA 92675-2042

I Maramica MD, PhD, MBA

Clinical Indication: N/A QCRL

Performing Site:

QCRL: QUEST DIAGNOSTICS REFERENCE LAB CAPISTRANO 33608 Ortega Highway San Juan Capistrano CA 92675

Reported Date: 2023.08.18 12:45 VONWI

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