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**Lab Dept:** Coagulation

**Test Name:** Von Willebrand Activity Assay

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***General Information***

**Lab Order Codes:** VWAC

**Synonyms:** Willebrands Factor Activity; VW Factor Assay, VWF GPIbM Activity

**CPT Codes:** 85397 – VWFGPIbM Activity

**Test Includes:** VWF Activity

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***Logistics***

**Test indications:** Aid with the differential diagnosis of hemophilia and types of von Willebrands disease.

**Lab Testing Sections:** Coagulation (Minneapolis campus)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Twice weekly (Tuesday and Thursday) Minneapolis lab ONLY

**Turnaround Time:** 3 – 5 Days

**Special Instructions:** Deliver immediately to the laboratory at room temperature

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***Specimen***

**Specimen Type:** Whole Blood

**Container:** Light Blue (Buffered Na Citrate 3.2%) top tube

**Draw Volume:** 2. mL blood

**Processed Volume:** 0.9 mL plasma

- Collection:**
- Mix thoroughly by gentle inversion. Deliver immediately to the laboratory at room temperature via courier or pneumatic tube.
  - Capillary collection is unacceptable.
  - Patient's with HCT > 55% must have a special tube made to adjust for high value. Contact lab for a special tube.

**Off campus collection (and St. Paul lab):** see Special processing below.

- Special Processing:**
- Centrifuge the specimens for 5 minutes in Stat Spin centrifuge.
  - After the first spin, using a plastic transfer pipette, remove the plasma to just above the cell line and place the plasma into a plastic tube(s). It may vary as to how many aliquot tubes you will need.
  - Spin this/these plastic tube(s) at the same designated speed and time.
  - Using a new plastic transfer pipette, slowly remove the plasma from the aliquot tube(s), avoiding any small cell button that may be present.
  - Transfer this plasma into a second plastic tube.
  - Cap the tube(s), ensure proper labeling and freeze in the -70°C freezer until testing is performed. (MPLS)
  - Cap the tube(s), ensure proper labeling and freeze in the -70°C freezer and deliver to the Minneapolis lab on dry ice.(St. Paul and off-campus)
  - **Validation of your lab's centrifuge for platelet-poor plasma is required.**

**Patient Preparation:** No Heparin for minimum of 48 hours prior to testing

**Sample Rejection:** Improper tube type; clotted specimen; under-filled tubes; mislabeled/unlabeled tubes.

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### ***Interpretive***

**Reference Range:** **VW Activity in %: 55-200%**

Normal, full-term newborn infants may have mildly increased levels which reach adult levels by 90 days postnatal. Healthy, premature infants (30-36 weeks gestation) may have increased levels that reach adult levels by 180 days.

Note: Individuals of blood group "O" may have lower plasma von Willebrand factor (VWF) activity than those of other ABO blood groups, such that apparently normal individuals of blood group "O" may have plasma VWF activity as low as 40% to 50%, whereas the lower limit of the reference range for individuals of other blood groups may be 60% to 70%.

**Critical Values:** N/A

**Limitations:** N/A

**Methodology:** Turbidimetric latex-based assay

**References:**

1. H21-A5 Collection, Transport and Processing of Blood Specimens for testing Plasma-based Coagulation Assays and Molecular Hemostasis Assays; Approved Guideline – 5<sup>th</sup> Edition
2. [INNOVANCE VW Activity Application Sheet](#), ASH CS-5100 VON-WILLEBRAND-FACTOR OPHL-03\_U\_EN\_01

**Updates:**

New test: Ristocetin Cofactor Assay no longer performed, Innovance VW Activity Assay (GPIbM Activity) in use.