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**Lab Dept:** Coagulation

**Test Name:** RISTOCETIN COFACTOR

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***General Information***

**Lab Order Codes:** RISTM

**Synonyms:** Willebrand Factor Activity; VW Factor Assay

**CPT Codes:** 85245 - Factor VIII vW Factor, Ristocetin cofactor

**Test Includes:** Ristocetin cofactor resulted as a %.

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***Logistics***

**Test Indications:** Aid with the differential diagnosis of hemophilia and type of von Willebrand disease.

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

**Phone Numbers:** Minneapolis: 612-813-6280

St. Paul: 651-220-6550

**Test Availability:** Twice Weekly (Tuesday and Friday)

**Turnaround Time:** 3 – 5 Days

**Special Instructions:** See [Patient Preparation](#)  
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:** 2.7 mL blood

**Processed Volume:** 0.9 mL plasma

**Collection:**

- A clean venipuncture is essential, avoid foaming.
- Entire sample must be collected with single collection, pooling of sample is unacceptable.
- Capillary collection is unacceptable.
- Patient's with a hematocrit level >55% must have a special tube made to adjust for the hematocrit; contact lab for a special tube.
- Mix thoroughly by gentle inversion. Deliver immediately to the laboratory at room temperature via courier or pneumatic tube.

**Off campus collections:**

- Must be tested within 4 hours.
- Do not refrigerate.
- If not received in our lab within 4 hours of collection, sample must be centrifuged and \*platelet-poor plasma removed from cells and transferred to an aliquot tube being careful not to disturb the cell layer. Centrifuge the plasma a second time and transfer into a clean aliquot tube being careful not to include any residual platelets on the bottom of the tube. Freeze at -20°C and deliver to the lab on dry ice within 2 weeks.

**\*Validation of your lab's centrifuge for platelet poor plasma is required.**

**Special Processing:**

Lab Staff: All testing will be performed in Minneapolis.

St. Paul Lab: Send whole blood specimens to Mpls for processing via courier. Must be processed within 4 hours of collection. Contact Mpls prior to sending.

Mpls Lab: Spin sample collected in blue top tube for 5 minutes on the Stat Spin centrifuge, remove plasma and transfer to a 4 mL BCS sample cup. Spin plasma again for 5 minutes in the Stat Spin Centrifuge. Transfer plasma to a new BCS sample cup for analysis leaving approximately 200 uL in the bottom of the original cup to discard. Store at frozen (-70 degrees C) temperatures if not run immediately.

**Patient Preparation:**

No Heparin for 2 days prior to testing.

**Sample Rejection:**

Improper tube; clotted specimen; underfilled tube; mislabeled or unlabeled specimens

***Interpretive***

**Reference Range:**

Age	Healthy Premie Range (%)	Full Term Infant Range (%)
Day 1	78 – 210%	86 – 220%
Day 5	72 – 219%	83 – 197%
Day 30	66 – 216%	69 – 187%

Day 90	75 – 184%	84 – 162%
Day 180	54 – 158%	62 – 152%
<b>Childhood</b>	<b>Range (%)</b>	
1 – 5 years	60 – 120%	
6 – 10 years	44 – 144%	
11 – 16 years	46 – 153%	
<b>Adult</b>	50 – 158%	

**Critical Values:**

N/A

**Limitations:**

N/A

**Methodology:**

Measurement of agglutination of formalin-fixed platelets by patient's plasma with ristocetin as compared to agglutination produced by a standard plasma used to prepare a curve.

**References:**

Harmening DH (1997) Clinical Hematology and Fundamentals of Hemostasis

**Updates:**

5/24/2010: Tubing of patient specimens is no longer prohibited.  
12/14/2010: Processing information updated.  
9/15/2014: Added off campus collection info.