

Client  
Gurugram  
Pathkind Diagnostics Pvt. Ltd.  
Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

Processed By  
Pathkind Diagnostics Pvt. Ltd.  
Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

Name	: Mrs. PL160	Billing Date	: 07/07/2023 12:25:42
Age	: 35 Yrs	Sample Collected on	: 10/07/2023 10:01:31
Sex	: Female	Sample Received on	: 10/07/2023 11:02:13
P. ID No.	: P1000100012819	Report Released on	: 15/07/2023 17:42:38
Accession No	: 10002304875	Barcode No.	: 10002304875-02, 10002304875-01
Referring Doctor	: Self	Ref no.	:
Referred By	:		

### Report Status - Final

Test Name	Result	Biological Ref. Interval	Unit
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### HAEMATOLOGY

#### APLA Profile

##### PTT & Mixing Studies Plasma

PTT (Test) <i>Sample: Citrate Plasma</i>	26.40	24.80 - 34.40	Sec
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PTT Control (Normal Pooled Plasma) <i>Sample: Citrate Plasma</i>	28.4	24.8 - 34.4	Sec
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##### Lupus Anticoagulant Screen Time

DRVV Screen Test <i>Sample: Citrate Plasma</i>	34.60	33.80 - 45.80	Sec
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DRVV Screen Control <i>Sample: Citrate Plasma</i>	39.0	33.8 - 45.8	Sec
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DRVV Screen Ratio <i>Sample: Citrate Plasma</i>	0.92	<1.20	Ratio
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Lupus Anticoagulant <i>Sample: Citrate Plasma</i>	Absent		Sec
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### SEROLOGY

Cardiolipin IgG Antibodies <i>Sample: Serum</i> <i>Method: ELISA</i>	7.20	Negative : < 10 Positive : >=10	GPL-U/ml
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Cardiolipin IgM Antibodies <i>Sample: Serum</i> <i>Method: ELISA</i>	0.02	Negative : <7 Positive : >/= 7	MPLU/mL
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Anti Phospholipid IgG Antibodies <i>Sample: Serum</i> <i>Method: ELISA</i>	3.40	Negative < 10 U/mL Positive : > =10 U/mL	U/mL
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Anti Phospholipid IgM Antibodies <i>Sample: Serum</i> <i>Method: ELISA</i>	1.20	Negative : < 10 U/mL	U/mL
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Positive : > = 10 U/mL

**Lupus Anticoagulant**

Medical Remarks: See Remark - 5. Correlate Clinically.

**Test Description:** Screening of Lupus Anticoagulant Confirmation is done by two different APTT reagents namely Lupus sensitive (LS) APTT Automate and RVVT. Lupus anticoagulant is an antiphospholipid antibody directed against negatively charged phospholipids that is identified functionally by prolongation of in vitro phospholipids dependent coagulation test. Lupus anticoagulant is often associated with a thrombotic tendency.

**Interpretation :**

1. Following is the final Interpretative Table using the findings of both the above mentioned tests:

APTT (LS)	APTT Mixing (Using Rosner Index)	DRVVT (Screen)	DRVVT (Confirmation)	DRVV screen to confirmation ratio	Interpretation
Normal	-	Normal	-	-	LAC Absent
Abnormal	Corrected	Normal	-	-	Suspect Factor Deficiency
Abnormal	Not Corrected	Abnormal	Normal	> 1.2	LAC Present
Normal	-	Abnormal	Normal	> 1.2	LAC Present
Abnormal	Corrected/Partially Corrected	Abnormal	Normal	> 1.2	Factor Deficiency + LAC Present
Abnormal	Not Corrected	Abnormal	Abnormal	< 1.2	Either Inhibitor or LAC
Abnormal	Not Corrected	Normal	-	-	Suspect Inhibitor/heparin

2. Interpretation of APTT mixing based on Rosner Index (RI) Rosner Index = Clotting time of mixture - Clotting time of normal (PPP) X 100/Clotting time of patient plasma \* If Rosner Index < 12 then APTT mixing is considered as corrected and Suspects the factor deficiency.

\* If Rosner Index < 12 then APTT mixing is considered as corrected and Suspects the factor deficiency.

\* If Rosner Index > 12 then APTT mixing is considered as not corrected and suspects the presence of inhibitor or Lupus.



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3. All abnormal results of DRVV screening tests are confirmed by neutralization assay using Phospholipids. A normalized ratio  $\geq$  Biological Reference Interval confirms the presence of lupus anticoagulant (LAC).

4. Persistent Positive LAC results on two different occasions & 12 weeks apart are essential to suspect & diagnose Lupus anticoagulant.

5. In view of abnormal DRVV Screen, abnormal DRVV confirm and normalised ration  $<1.2$ , possibility of Lupus and/or Inhibitor needs exclusion. Advice repeat testing after 12 weeks.

#### Limitations :

1. False Positive: Patients on heparin or heparin substitute; Coagulation factor VIII inhibitors.
2. False Negative: Elevated factor VIII levels, as may be seen in an acute infection or with replacement therapy when someone has Hemophilia A, may shorten the aPTT time, leading to a temporary false negative test for lupus anticoagulant.

Reference : Update of the guidelines for lupus anticoagulant detection. Pengo V, Tripodi A, et al. J Thromb Haemost 2009;7:1737-40.

## Cardiolipin IgG Antibodies

### Clinical Significance :

ANTI-CARDIOLIPIN ANTIBODIES (ACA) are antibodies often directed against cardiolipin and found in several diseases

1. The presence of anti cardiolipin antibodies in Systemic Lupus Erythematosus (SLE) can be related to the development of thrombosis and thrombocytopenia.
2. In Gynecology practice they are associated with Intrauterine Death or recurrent abortions and unexplained infertility.
3. They are also found in some non thrombotic neurological disorders e.g. cerebrovascular insufficiency, cerebral ischemia or chorea. Transient elevation can be seen in other autoimmune & intercurrent diseases. Persistent positive test with titre more than 40 GPL/ml and spaced at least 12 weeks apart is significant in antiphospholipid antibody syndrome.

## Cardiolipin IgM Antibodies

### Clinical Significance :

ANTI-CARDIOLIPIN ANTIBODIES (ACA) are antibodies often directed against cardiolipin and found in several diseases

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3. They are also found in some non thrombotic neurological disorders e.g. cerebrovascular insufficiency, cerebral ischemia or chorea. Transient elevation can be seen in other autoimmune & intercurrent diseases. Persistent positive test with titre more than 40 GPL/ml and spaced at least 12 weeks apart is significant in antiphospholipid antibody syndrome.			

### Anti Phospholipid IgG Antibodies

#### Interpretation:

- Elevated levels of anti phospholipid antibodies (APLA) are seen in cases of Systemic Lupus Erythematosus (SLE) and other Systemic autoimmune disorders like Rheumatoid arthritis, Scleroderma, Sjogrens's syndrome etc.
- The occurrence of APLA in patients with SLE and related diseases indicates secondary anti phospholipid syndrome (APS).
- Presence of APS with no other autoimmune disease indicates primary APS.
- Persisting high APLA titres are considered as a risk factor for thrombovascular complications.

### Anti Phospholipid IgM Antibodies


#### Interpretation:

- Elevated levels of anti phospholipid antibodies (APLA) are seen in cases of Systemic Lupus Erythematosus (SLE) and other Systemic autoimmune disorders like Rheumatoid arthritis, Scleroderma, Sjogrens's syndrome etc.
- The occurrence of APLA in patients with SLE and related diseases indicates secondary anti phospholipid syndrome (APS).
- Presence of APS with no other autoimmune disease indicates primary APS.
- Persisting high APLA titres are considered as a risk factor for thrombovascular complications.

\*\* End of Report \*\*



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Senior Consultant



Dr. Saloni Garg  
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Consultant Microbiology

