H·O·D
HOUSE of DIAGNOSTICS

Patient Name :	Demo Patient Name	**Lab No :**	Demo Visit No
Age / Sex :	28 Y / M	**Registration On :**	31-Dec-24 14:37
Referred By :	DEMO HOSPITAL	**Patient ID :**	UHID.DEMO.001
Centre :	HOD Head Office		

Protein C

Sodium Citrate 3.2% Sample

Accession No: DEMO_BARCODE **Collected On:** 31-Dec-24 14:37 **Received On:** 31-Dec-24 17:39 **Approved On:** 31-Dec-24 19:32

Observation	Result	Unit	Biological Ref. Interval	Method
Protein C Activity	90.56	%	65 - 140	ELFA

Comments:

- Protein C is a vitamin K-dependent anticoagulant proenzyme. It is synthesized in the liver and circulates in the plasma. The biological half-life of plasma protein C is approximately 6 to 10 hours, similar to the relatively short half-life of coagulation factor VII. Protein C is activated by thrombin, in the presence of an endothelial cell cofactor (thrombomodulin), to form the active enzyme, activated protein C (APC). APC functions as an anticoagulant by proteolytically inactivating the activated forms of coagulation factors V and VIII (factors Va and VIIIa). APC also enhances fibrinolysis by inactivating plasminogen activator inhibitor (PAI-1).
- Expression of the anticoagulant activity of APC is enhanced by a cofactor, protein S, another vitamin K-dependent plasma protein.

Pathophysiology

- Congenital homozygous protein C deficiency results in a severe thrombotic diathesis, evident in the neonatal period and resembling purpura fulminans.
- Congenital heterozygous protein C deficiency may predispose to thrombotic events, primarily venous thromboembolism. Arterial thrombosis (stroke, myocardial infarction, etc) may occur. Some individuals with hereditary heterozygous protein C deficiency may have no personal or family history of thrombosis and may or may not be at increased risk.

The 2 types of hereditary heterozygous protein C deficiencies that are recognized are:
-Type I (concordantly decreased protein C function and antigen)
-Type II (decreased protein C function with normal antigen)

Acquired deficiency of protein C may occur in association with:
-Vitamin K deficiency
-Oral anticoagulation with coumarin compounds
-Liver disease
-Intravascular coagulation and fibrinolysis/disseminated intravascular coagulation (ICF/DIC)

Interpretation:

- Values <70% to 75% may represent a congenital deficiency state, if acquired deficiencies can be excluded.
- Protein C antigen and activities generally are undetectable in individuals with severe, homozygous protein C deficiency.
- Acquired protein C deficiency is of uncertain clinical hemostatic significance.
- Clinical significance of increased protein C is unknown.

Cautions

- Assay of protein C functional activity is recommended for initial laboratory evaluation of patients suspected of having congenital protein C deficiency (personal or family history of thrombotic diathesis).
- Not useful for predicting a thrombotic event.

Remarks: Please correlate results with clinical conditions.

This is a Demo Signature
and the doctor's signature should appear here

In case of any unexpected or alarming results, please contact us immediately for re-confirmation, clarifications, and rectifications, if needed.

Scan to Validate