

PROTEIN C ACTIVITY

Description	Protein C is a vitamin K dependent protein, which is present in plasma as a zymogen. Protein C is activated in vivo by thrombin in the presence of thrombomodulin. Activated Protein C exhibits an anticoagulant effect through the inhibition of factors Va and VIIIa, in the presence of calcium ions, phospholipids and its cofactor, Protein S. The anticoagulant effect is a prolongation of the clotting time. Deficiency of Protein C is associated with recurrent venous thrombosis and pulmonary embolism, especially in young adults. Acquired deficiencies of Protein C are associated with hepatic disorders, oral anticoagulant therapy, and Disseminated Intravascular Coagulation. The ProClot kit is a functional clotting
Indication	Performed when Amidolytic Protein C Activity is reduced.
Additional Info	The zymogenic form of protein C is a vitamin K-dependent glycoprotein which circulates in blood plasma. Its structure is that of a two-chain polypeptide consisting of a light chain and a heavy chain connected by a disulfide bond.
Concurrent Tests	Amidolytic Protein C Activity
Interpretation	Protein C results on the ACL TOP Family are not affected by heparin (UF) up to 1.5 U/mL, heparin (LMW) up to 0.7 U/mL, hemoglobin up to 200 mg/dL, bilirubin up to 25 mg/dL and triglycerides up to 600 mg/dL. Protein C results may be affected by LAC (Lupus Anticoagulant), high concentration of factor VIII (>250%) and by the presence of APC-R, particularly in patients homozygous for this genetic mutation.
Collection Conditions	Samples must be correctly filled as the ratio of anticoagulant to blood is crucial for accurate test results. Samples will be rejected by the laboratory if they are under or over filled. Samples should arrive in the laboratory within 4 hours of blood draw.
Frequency Of Testing	Abnormal results should be repeated in 6-12 weeks.
Clinical Advice/Contact	Haematology Registrar