

Is it Factor V or Factor V Leiden?

Factor V is rarely ordered

Pediatric hematologists order a factor V assay to diagnose congenital factor V deficiency, a rare disorder that causes severe bleeding beginning in early childhood. Factor V may occasionally be ordered when a factor V inhibitor is suspected.

Factor V Leiden is ordered often

The factor V Leiden mutation is present in 3-8% of Caucasians and Hispanics and confers a 2- to 3-fold risk of thrombosis (18-fold when homozygous). The factor V Leiden mutation test is usually ordered as part of a profile that includes antithrombin (AT, ATIII), protein C (PC), protein S (PS), factor VIII (for elevated factor VIII), prothrombin 20210 mutation, and lupus anticoagulant (LAC).

When the factor V Leiden mutation assay is ordered, the laboratory screens with the *activated protein C resistance* (APCR) assay and reflexes to the factor V Leiden mutation molecular test when the APCR ratio is positive.

Is it Factor X or Anti-factor Xa?

Factor X is rarely ordered

Pediatric hematologists order the factor X assay to diagnose congenital factor X deficiency, a very rare disorder that causes severe bleeding beginning in early childhood. Some laboratories offer the chromogenic factor X assay as an alternative to the prothrombin time to monitor Coumadin.

Anti-factor Xa is ordered often

The anti-factor Xa test is used to monitor heparin therapy. It is ordered to monitor standard, unfractionated heparin when the partial thromboplastin time (PTT) cannot be used, such as when the patient has the lupus anticoagulant. The anti-Xa test is the only test that can be used to monitor low molecular weight heparin (LMWH) such as Lovenox® or Fragmin® or the synthetic pentasaccharide fondaparinux (Arixtra®).

Is it Protein C, C-reactive Protein, or Activated Protein C Resistance?

Protein C is part of a Thrombosis Risk Profile

Physicians rarely order protein C alone, as protein C deficiency is one of the venous thrombosis risk factors. Protein C is usually ordered in a profile that includes antithrombin (AT, ATIII), protein S, activated protein C resistance ratio (APCR), prothrombin 20210, and lupus anticoagulant.

Activated Protein C Resistance Ratio is part of a Thrombosis Risk Profile

Physicians rarely order the activated protein C resistance ratio (APCR) alone, as activated protein C resistance is one of the venous thrombosis risk factors. APCR is usually ordered in a profile that includes antithrombin (AT, ATIII), protein S, protein, prothrombin 20210, and lupus anticoagulant. The APCR is a screen for factor V Leiden mutation, when it is positive, the factor V Leiden mutation assay is ordered as a reflex follow-up.

C-reactive Protein is a non-coagulation-related assay

Physicians often order the C-reactive protein, also known as high sensitivity C-reactive protein, as a measure of inflammation, as C-reactive protein is an acute phase reactant. The C-reactive protein assay is not part of the coagulation laboratory test menu.