

Factor Va, Human Plasma recombinant protein

Activated protein C cofactor, Proaccelerin (labile factor)
Catalog # PBV10089r

Specification

Factor Va, Human Plasma recombinant protein - Product info

Primary Accession P12259

Calculated MW 94.0 kDa (heavy chain), 74.0 kDa (light

chain) KDa

Factor Va, Human Plasma recombinant protein - Additional Info

Gene ID 2153
Gene Symbol F5

Other Names

Activated protein C cofactor, Proaccelerin (labile factor)

Gene Source Human

Source Human plasma
Assay&Purity SDS-PAGE; ≥95%

Assay2&Purity2 HPLC; Recombinant No

Target/Specificity

Factor Va

Format Liquid

Storage

-20°C; Liquid in 41.3 μl 20 mM HEPES, 150 mM NaC1, pH 7.5, 5 mM CaCl2 +50% glycerol

Factor Va, Human Plasma recombinant protein - Protocols

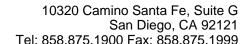
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Factor Va, Human Plasma recombinant protein - Images

Factor Va, Human Plasma recombinant protein - Background

Factor Va is a cofactor for the serine protease factor Xa, and in the presence of calcium ions they





collectively assemble on a phospholipid surface to form the prothrombinase complex. The prothrombinase complex is responsible for the rapid conversion of prothrombin to thrombin. Factor Va is derived from the pro-cofactor, factor V, upon limited proteolysis by alpha-thrombin. The thrombin cleavage of factor V liberates two heavily glycosylated activation peptides from the central portion of the molecule which have no cofactor function. Factor Va is comprised of an NH2-terminal derived heavy chain (Mr=94,000) and a COOH-terminal derived light chain (Mr=74,000) which remain associated in the presence of calcium ions. The cofactor binds to phospholipid (cell membrane) surfaces and effectively serves as a receptor for membrane bound factor Xa. Complete assembly of the prothrombinase complex (factor Xa, factor Va, phospholipid, and calcium) results in a 300,000-fold increase in the rate of prothrombin conversion relative to the rate observed with factor Xa alone. The interaction between factor Va and factor Xa is mediated by both the heavy and light chain of factor Va, while the binding of prothrombin to factor Va is mediated solely by the heavy chain.

Factor Va, Human Plasma recombinant protein - References

Jenny R.J., et al. Proc. Natl. Acad. Sci. U.S.A. 84:4846-4850(1987). Cripe L.D., et al. Biochemistry 31:3777-3785(1992). Gregory S.G., et al. Nature 441:315-321(2006). Ota T., et al. Nat. Genet. 36:40-45(2004). Kane W.H., et al. Biochemistry 26:6508-6514(1987).