F5 / Coagulation Factor V (F5) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	F5 / Coagulation Factor V, Recombinant Protein
Full Product Name	Human F5 / Coagulation Factor V Recombinant Protein
Product Gene Name	F5 recombinant protein
Product Synonym Names	Coagulation factor V; Activated protein C cofactor; Proaccelerin; labile factor
Host	E Coli
Form/Format	Liquid; 50mM NaH2PO4, 500mM NaCl Buffer with 500mM Imidazole, 10% Glycerol (PH8.0)
Purity/Purification	>95% by SDS-PAGE
Concentration	Reconstitution Dependent (lot specific)
Preparation and Storage	Store at -20 degree C. Avoid repeated freezing and thawing.
OMIM	188055
3D Structure	ModBase 3D Structure for P12259
Species	Human
Tag	His
Subunit	Factor Va, the activated form of factor V, is composed of a heavy chain and a light chain, non-covalently bound. The interaction between the two chains is calcium-dependent. Forms heterodimer with SERPINA5.
Entry Function	Central regulator of hemostasis. It serves as a critical cofactor for the prothrombinase activity of factor Xa that results in the activation of prothrombin to thrombin.
Applications Tested/Suitable for F5 recombinant protein	ELISA (EIA), Western Blot (WB), Antigen Protein (AP), Protein Array
Related Product Information for F5 recombinant protein	MBS2901924 is a recombinant protein targeting F5. Also known as Human F5 / Coagulation Factor V Recombinant Protein. Host: E Coli.
Other Notes	Small volumes of F5 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for F5. It may not necessarily be applicable to this product.

NCBI GI #	105990535
NCBI GeneID	2153
NCBI Accession #	NP_000121.2
UniProt Primary Accession #	P12259
UniProt Related Accession #	P12259
GenBank Nucleotide #	NP_000121.2
NCBI Official Full Name	coagulation factor V preproprotein

NCBI Official Synonym Full Names	coagulation factor V
NCBI Official Symbol	F5
NCBI Official Synonym Symbols	FVL; PCCF; THPH2; RPRGL1
UniProt Protein Name	Coagulation factor V
UniProt Synonym Protein Names	Activated protein C cofactor; Proaccelerin, labile factor
Protein Family	Coagulation factor
UniProt Gene Name	F5
UniProt Entry Name	FA5_HUMAN
NCBI Protein Information	coagulation factor V
NCBI Summary for F5	This gene encodes an essential cofactor of the blood coagulation cascade. This factor circulates in plasma, and is converted to the active form by the release of the activation peptide by thrombin during coagulation. This generates a heavy chain and a light chain which are held together by calcium ions. The activated protein is a cofactor that participates with activated coagulation factor X to activate prothrombin to thrombin. Defects in this gene result in either an autosomal recessive hemorrhagic diathesis or an autosomal dominant form of thrombophilia, which is known as activated protein C resistance. [provided by RefSeq, Oct 2008]
UniProt Comments for F5	factor V: Central regulator of hemostasis. It serves as a critical cofactor for the prothrombinase activity of factor Xa that results in the activation of prothrombin to thrombin. Defects in F5 are the cause of factor V deficiency (FA5D); also known as Owren parahemophilia. It is an hemorrhagic diastesis. Defects in F5 are the cause of thrombophilia due to activated protein C resistance (THPH2). THPH2 is a hemostatic disorder due to defective degradation of factor Va by activated protein C. It is characterized by a poor anticoagulant response to activated protein C resulting in tendency to thrombosis. Defects in F5 are a cause of susceptibility to Budd- Chiari syndrome (BDCHS). A syndrome caused by obstruction of hepatic venous outflow involving either the hepatic veins or the terminal segment of the inferior vena cava. Obstructions are generally caused by thrombosis and lead to hepatic congestion and ischemic necrosis. Clinical manifestations observed in the majority of patients include hepatomegaly, right upper quadrant pain and abdominal ascites. Budd-Chiari syndrome is associated with a combination of disease states including primary myeloproliferative syndromes and thrombophilia due to factor V Leiden, protein C deficiency and antithrombin III deficiency. Budd-Chiari syndrome is a rare but typical complication in patients with polycythemia vera. Defects in F5 may be a cause of susceptibility to ischemic stroke (ISCHSTR); also known as cerebrovascular accident or cerebral infarction. A stroke is an acute neurologic event leading to death of neural tissue of the brain and resulting in loss of motor, sensory and/or cognitive function. Ischemic strokes, resulting from vascular occlusion, is considered to be a highly complex disease consisting of a group of heterogeneous disorders with multiple genetic and environmental risk factors. Defects in F5 are associated with susceptibility to pregnancy loss, recurrent, type 1 (RPRGL1). RPRGL1 is a common complication of pregnancy, resulting in spontaneous abortion before the fetus has reached viability. The term includes all miscarriages from the time of conception until 24 weeks of gestation. Recurrent pregnancy loss is defined as 3 or more consecutive spontaneous abortions. Belongs to the multicopper oxidase family. Protein type: Protease; Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 1q23 Cellular Component: Golgi apparatus; extracellular space; membrane; endoplasmic reticulum; extracellular region; plasma membrane; vesicle Molecular Function: protein binding; copper ion binding; serine-type endopeptidase activity Biological Process: platelet activation; platelet degranulation; blood circulation; proteolysis; blood coagulation Disease: Thrombophilia Due To Activated Protein C Resistance; Budd-chiari Syndrome; Pregnancy Loss, Recurrent, Susceptibility To, 1; Stroke, Ischemic; Factor V Deficiency
Research Articles on F5	**1.** High prevalence of Factor V Leiden 1691G/A variation in preeclamptic patients compared to controls suggest an involvement of this variation in predisposing to preeclampsia in this setting.

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