



Sheep anti-human Factor V (F.V)

Whole IgG from antiserum

10 mg

Product #: SAFV-IG

Lot #: XXXX

Expiry date: XXXX

Store at -10 to -20°C

For Research Use Only.

Not for use in diagnostic procedures.

Description of Factor V (F.V)

Factor V (formerly referred to as accelerator globulin and labile factor) is a large glycoprotein (320 kDa) that is produced in the liver. The gene that encodes factor V (F.V) is located on chromosome 1. A congenital deficiency of F.V is a hemorrhagic disorder inherited as an autosomal recessive disease.

The concentration of F.V in plasma is typically 10 µg/ml. F.V is a pro-cofactor that is activated through limited proteolysis by thrombin, or by activated factor X in the presence of phospholipid surface. Other physiologic activators of F.V include plasmin, neutrophil elastase and platelet calpain. The activated cofactor (F.Va) is an essential component of the prothrombin activator complex, which consists of F.Va, activated factor X, calcium and anionic phospholipid surface. The intact prothrombinase complex activates prothrombin to thrombin at a rate 300,000-fold greater than activated factor X alone. In a positive feedback loop, the thrombin generated accelerates its own generation by activating more F.V to F.Va. Thrombin also acts to down-regulate F.Va indirectly by activating Protein C, which inactivates F.Va cofactor activity¹⁻³.

REFERENCES and REVIEWS

1. Kane WH, Davie EW; Blood Coagulation Factors V and VIII: Structural and functional similarities and their relationship to hemorrhagic and thrombotic disorders. Blood 71:539, 1988.
2. Hoyer, LW, Wyshock EG, Colman RW, in Hemostasis and Thrombosis, 3rd Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp. 109-133, J.B. Lippincott Co., Philadelphia, 1994.
3. Nesheim ME, Katzmann JA, Tracy PB, Mann KG; in Methods in Enzymology 80:249, 1980.

Product Specifications

Description:

Vial containing XXXX ml of whole IgG representing approximately 1 ml of antiserum. Total protein is 10 mg.

Format:

Whole IgG, clear liquid.

Host Animal:

Sheep

Immunogen:

Human factor V purified from plasma.

Concentration:

IgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient ($E^{1\%}_{280}$) of 13.4.

Buffer:

10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol.

Storage:

Store between -10 and -20°C. Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use.

Specificity:

This antibody is specific for factor V as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of antibodies to human factor V.

Neutralizing activity:

XXXX Bethesda Units/ml IgG against normal plasma. One Bethesda unit/ml is defined as the amount of inhibitor that resulted in 50% residual F.V activity after 2 hours at 37°C (Kasper CK *et al*, Thromb Diath Haemorrh 34:869, 1975).

Species Cross Reactivity: (immunodiffusion vs. citrated plasma)

Human:	XXXX	Mouse:	XXXX	Rat:	XXXX
Rabbit:	XXXX	Pig:	XXXX	Dog:	XXXX