



Monoclonal Anti-mouse Coagulation Factor VII Antibody

ORDERING INFORMATION

Catalog Number: MAB33051

Clone: 406707

Lot Number: CAGX02

Size: 100 µg

Formulation: 0.2 µm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

Specificity: mouse Factor VII

Immunogen: CHO cell-derived rmFactor VII

Ig class: rat IgG_{2A}

Recommended Applications:
Western blot
Immunohistochemistry

Other Application:
Direct ELISA

Background

Coagulation Factor VII (Factor VII) is synthesized in the liver and circulates in the plasma where it binds to tissue Factor (TF) and is rapidly converted into VIIa. The resulting 1:1 complex of VIIa and TF initiates the coagulation pathway and also has important coagulation-independent functions such as angiogenesis. The predominant splicing variant of Factor VII in normal liver corresponds to the 446 amino acid precursor. After cleavage of a signal peptide (residues 1 to 24) and a propeptide (residues 25 - 41), the mature chain can be further processed into the light chain (residues 42 to 193) and the heavy chain (residues 194 to 446). The amino acid sequence of human Factor VII is 76%, 71%, 70% and 57% identical to that of canine, mouse, rat and chicken.

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, CHO cell-derived, recombinant mouse Factor VII (rmFactor VII; Accession # P70375; aa 42 - 446; R&D Systems, Catalog # 3305-SE). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody detects rmFactor VII in direct ELISAs and Western blots. This antibody does not cross-react with rhFactor X, rhFactor XI, rhPROC, rhThrombin, rhKLK-1, -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, -13, -14, -15, or KLK-B1.

Applications

Western blot - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect mouse Factor VII. Using a colorimetric detection system, the detection limit for rmFactor VII is approximately 25 ng/lane under non-reducing and reducing conditions. Chemiluminescent detection will increase sensitivity by 5 to 50 fold.

Immunohistochemistry - This antibody was used at a concentration of 25 µg/mL with appropriate secondary reagents to detect Factor VII in paraformaldehyde-fixed mouse splenocytes. For chromogenic detection of labeling, the use of R&D Systems Cell and Tissue Staining Kits (CTS Series) is recommended.

Direct ELISA - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect mouse Factor VII. The detection limit for rmFactor VII is approximately 10 ng/well.

For immunohistochemistry images, please refer to our website at <http://www.RnDSystems.com/go/ihc>.

Optimal dilutions should be determined by each laboratory for each application.