

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Coagulation Factor VII in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) Factor X, rhFactor XI, rhPROC, rhThrombin, rhKallikrein 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, or Kallikrein B1 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 406707
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human mouse Coagulation Factor VII Ala42-Leu446 Accession # P70375
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

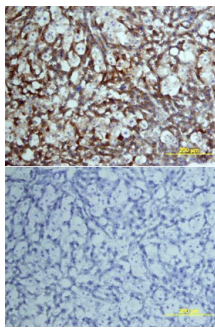
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	µg/mL	No Sample Info
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



Coagulation Factor VII in Mouse Liver. Coagulation Factor VII was detected in perfusion fixed frozen sections of mouse liver using Rat Anti-Mouse Coagulation Factor VII Monoclonal Antibody (Catalog # MAB33051) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Coagulation Factors VII and VIIa refer to the pro and active forms of the same protease, respectively (1). Factor VII is synthesized in the liver and circulates in the plasma where it binds to tissue factor (TF), an integral membrane protein found in a variety of cell types. Upon binding of TF, factor VII is rapidly converted into VIIa. The resulting 1:1 complex of VIIa and TF initiates the coagulation pathway and has also important coagulation-independent functions such as angiogenesis (2). The cleavage and activation of Coagulation Factors VII, IX and X by VIIa:TF is phospholipid-dependent whereas the cleavage of small peptide substrates is not (1). The deduced amino acid sequence of mouse factor VII predicts a signal peptide (residues 1 to 24), propeptide (residues 25 to 41), and the mature chain that 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 mouse Factor VII is 89%, 71%, 65% and 55% identical to that of rat, human/dog, chimpanzee and chicken.

References:

1. Morrissey, J.H. (2004) in *Handbook of Proteolytic Enzymes*, Barrett, A.J. et al. (eds.), Academic Press, San Diego, p. 1659.
2. Versteeg, H.H. et al. (2003) *Carcinogenesis* **24**:1009.