

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Coagulation Factor VII in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) Kallikrein-1, -2, -3, -4, -5, -7, -8, -9, -10, -11, -12, -13, -14, -15, -B1, rhHGFA, rhFactor X, rhFactor XI, rhThrombin, rhuPA-1, or rhPROC is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 321621
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Coagulation Factor VII Ala39-Pro444 Accession # NP_062562
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.

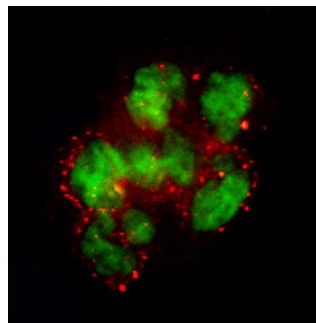
APPLICATIONS

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	1 µg/mL	Recombinant Human Coagulation Factor VII (Catalog # 2338-SE)
Immunocytochemistry	8-25 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Coagulation Factor VII (Catalog # 2338-SE), see our available Western blot detection antibodies

DATA

Immunocytochemistry



Coagulation Factor VII in Human PBMCs.
Coagulation Factor VII was detected in immersion fixed PHA-stimulated human peripheral blood mononuclear cells (PBMCs) using 25 µg/mL Mouse Anti-Human Coagulation Factor VII Monoclonal Antibody (Catalog # MAB2338) for 3 hours at room temperature. Cells were stained (red) and counterstained (green). View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

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 predominant splicing variant of Factor VII in normal liver corresponds to the 444 amino acid precursor (3, 4). After a signal peptide (aa 1 to 38), the mature chain can be further processed into the light chain (aa 39 to 190) and the heavy chain (aa 191 to 444).

References:

1. Morrissey, J.H. (2004) in *Handbook of Proteolytic Enzymes*, Barrett, A.J. *et al.* eds. p. 1659.
2. Versteeg, H.H. *et al.* (2003) *Carcinogenesis* **24**:1009.
3. Hagen, F.S. *et al.* (1986) *Proc. Natl. Acad. Sci. USA* **83**:2412.
4. O'Hara, P.J. *et al.* (1987) *Proc. Natl. Acad. Sci. USA* **84**:5158.