Human Coagulation Factor VII Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: BAF2338

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Coagulation Factor VII in Western blots. In this format, approximately 10% cross-reactivity with recombinant mouse Coagulation Factor VII is observed and less than 5% cross-reactivity with recombinant human Factor XA is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Coagulation Factor VII (R&D Systems, Catalog # 2338-SE) Ala39-Pro444 Accession # NP_062562
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

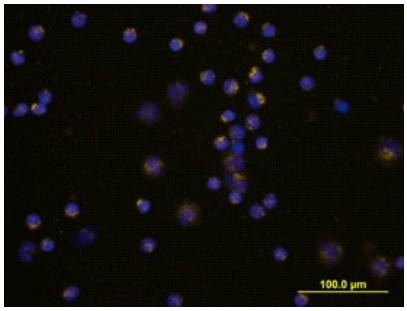
APPLICATIONS

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	0.1 µg/mL	Recombinant Human Coagulation Factor VII (Catalog # 2338-SE)
Immunocytochemistry	5-15 µg/mL	See Below

DATA

Immunocytochemistry



Coagulation Factor VII in Human PBMCs. Coagulation Factor VII was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Human Coagulation Factor VII Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF2338) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (yellow; Catalog # NL999) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 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 (residues 1 to 38), the mature chain can be further processed into the light chain (residues 39-190) and the heavy chain (residues 191-444).

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.

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