Human Coagulation Factor II/Thrombin Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: BAF1148

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Coagulation Factor II/Thrombin in Western blots. In this format, approximately 10% cross-reactivity with recombinant human Factor X is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Coagulation Factor II/Thrombin
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	Human Coagulation Factor II/Thrombin (Catalog # 2196-SE)

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 Factor II, commonly known as thrombin, is an essential component of the coagulation cascade in which it converts fibrinogen to fibrin, activates factors V, VII, VIII, XIII and forms complexes with protein C and thrombomodulin (1). It also activates platelets and regulates the behavior of additional cells through protease-activated receptors (PARs) (2). It may have either protective or deleterious functions, depending on the level and location (3). Its activity is regulated by endogenous inhibitors such as anti-thrombin III (serpin C1) or heparin cofactor II (serpin D1). A plasma serine protease, thrombin is synthesized in the liver as a 622 amino acid precursor with a 24 amino acid signal peptide. Cleavage by itself or by similar enzymes converts the proenzyme to three forms designated as α-, β- and γ-thrombin. Composed of a disulfide bond-linked dimer of the light chain (A) (residues 328-363) and the heavy chain (B) (residues 364-622), α-thrombin displays the diverse functions as described above. In comparison, the further processed B chains of β- and γ-thrombin have no known physiological function, but retain most of the activity towards small synthetic substrates (4).

References:

1. Degen, S.J. and E.W. Davie (1987) Biochemistry **26**:6165.
2. Coughlin, S.R. (2000) Nature **407**:258.
3. Xi, G. *et al.* (2003) J. Neurochem. **84**:3.
4. Rydel, T.J. *et al.* (1994) J. Biol. Chem. **269**:22000.

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