

Thrombin API (H-85): sc-33769

BACKGROUND

Hemostasis following tissue injury involves the deployment of essential plasma procoagulants (Prothrombin and Factors X, IX, V and VIII), which mediate a blood coagulation cascade that leads to the formation of insoluble fibrin clots and the promotion of platelet aggregation. Proteolytic cleavage of Prothrombin (Factor II) leads to formation of a 36 amino acid Thrombin light chain (LC; amino acids 328-363) and a 259 amino acid Thrombin heavy chain (HC; amino acids 364-622). In the first step of the coagulation cascade Thrombin cleaves bonds after Arg-Gly and activates Factors V, VII, VIII and XIII in complex with Thrombomodulin and protein C. Thrombin maintains vascular integrity during development and postnatal life and coordinates connective tissue proteins by stimulating fibroblast procollagen production.

REFERENCES

1. Davey, M.G., et al. 1967. Actions of Thrombin and other coagulant and proteolytic enzymes on blood platelets. *Nature* 216: 857-858.
2. Davie, E.W., et al. 1975. Basic mechanisms in blood coagulation. *Annu. Rev. Biochem.* 44: 799-829.

CHROMOSOMAL LOCATION

Genetic locus: F2 (human) mapping to 11p11.2.

SOURCE

Thrombin API (H-85) is a rabbit polyclonal antibody raised against amino acids 71-155 mapping near the N-terminus of Thrombin Activation Peptide 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Thrombin API (H-85) is recommended for detection of Thrombin API and Prothrombin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); does not detect APII, LC or HC.

Thrombin API (H-85) is also recommended for detection of Thrombin API and Prothrombin in additional species, including equine and canine.

Suitable for use as control antibody for Prothrombin siRNA (h): sc-40413, Prothrombin shRNA Plasmid (h): sc-40413-SH and Prothrombin shRNA (h) Lentiviral Particles: sc-40413-V.

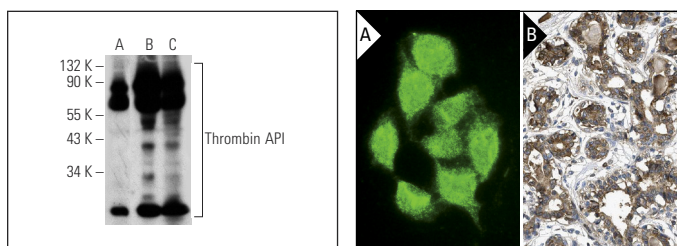
Molecular Weight of Thrombin API: 70/31 kDa.

Positive Controls: human platelet whole cell lysate: sc-363773, human plasma lysate: sc-364374 or human breast extract: sc-363753.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Thrombin API (H-85): sc-33769. Western blot analysis of Thrombin API expression in human platelet extract (A) and in human plasma (B) and human breast tissue extract (C).

Thrombin API (H-85): sc-33769. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells magnification (B).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Thrombin API (D-9): sc-376933** or **Thrombin API (B-2): sc-373848**, our highly recommended monoclonal alternatives to Thrombin API (H-85).