

# ATIII (4B3): sc-80618

## BACKGROUND

The serine proteinase inhibitors (serpins) compose a superfamily of proteins with a diverse set of functions, including the control of blood coagulation, complement activation, programmed cell death and development. Serpins are secreted glycoproteins that contain a stretch of peptide that mimics a true substrate for a corresponding serine protease. Antithrombin III (ATIII), an extracellular plasma protein, is a crucial serine protease inhibitor that regulates the coagulation cascade in blood. The inhibitory activity of ATIII is amplified in the presence of heparin. ATIII inhibits Thrombin and Factors IX A, X A and XI A. Defects in the gene SERPINC1, which encodes for ATIII, can cause ATIII deficiency, an autosomal dominant disease, which is a risk factor for hereditary thrombophilia.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: SERPINC1 (human) mapping to 1q25.1; Serpinc1 (mouse) mapping to 1 H2.1.

## STORAGE

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

## SOURCE

ATIII (4B3) is a mouse monoclonal antibody raised against ATIII of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

ATIII (4B3) is recommended for detection of heat denatured ATIII of human and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for ATIII siRNA (h): sc-44839, ATIII siRNA (m): sc-44840, ATIII shRNA Plasmid (h): sc-44839-SH, ATIII shRNA Plasmid (m): sc-44840-SH, ATIII shRNA (h) Lentiviral Particles: sc-44839-V and ATIII shRNA (m) Lentiviral Particles: sc-44840-V.

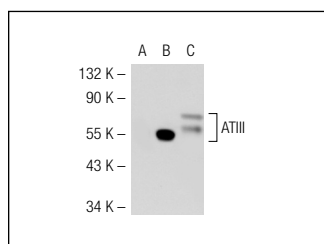
Molecular Weight of ATIII: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or human PBL.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

## DATA



ATIII (4B3): sc-80618. Western blot analysis of ATIII expression in non-transfected 293T: sc-117752 (A), mouse ATIII transfected 293T: sc-118611 (B) and human PBL (C) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.