

# ATIII (C-18): sc-32453

## 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 IXA, XA and XIA. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

ATIII (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ATIII 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.

Blocking peptide available for competition studies, sc-32453 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

ATIII (C-18) is recommended for detection of ATIII of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ATIII (C-18) is also recommended for detection of ATIII in additional species, including equine.

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.

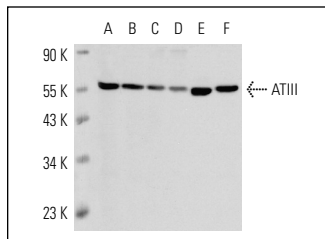
Molecular Weight of ATIII: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

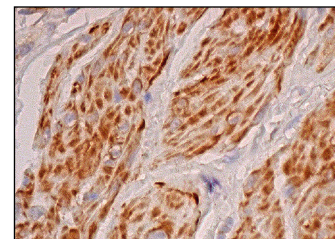
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



ATIII (C-18): sc-32453. Western blot analysis of ATIII expression in Hep G2 (A), HeLa (B), NIH/3T3 (C) and c4 (D) whole cell lysates and rat liver (E) and mouse liver (F) tissue extracts.



ATIII (C-18): sc-32453. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells.

## SELECT PRODUCT CITATIONS

- Shao, C., et al. 2009. Shotgun proteomic analysis of hibernating arctic ground squirrels. *Mol. Cell. Proteomics* 9: 313-326.
- Hannan, N.J., et al. 2010. 2D-DiGE analysis of the human endometrial secretome reveals differences between receptive and nonreceptive states in fertile and infertile women. *J. Proteome Res.* 9: 6256-6264.

## 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.



Try **ATIII (H-7): sc-271987** or **ATIII (A-6): sc-393867**, our highly recommended monoclonal alternatives to ATIII (C-18).