

# ITI-H1 (K-16): sc-33944

## BACKGROUND

The inter- $\alpha$ -trypsin inhibitor (ITI) family is a group of structurally related plasma serine protease inhibitors synthesized in the liver and built up from different combinations of three highly homologous heavy chains (ITI-H1, ITI-H2 and ITI-H3) and one light chain (Bikunin). Another member of the ITI family, ITI-H4 (also known as I  $\alpha$  IH4P) harbors a pro-rich region (PRR) in its C-terminus. ITI is a glycoprotein composed of three polypeptides linked by chondroitin sulphate: two heavy chains, ITI-H1 and ITI-H2, and Bikunin. Bikunin confers the protease-inhibitor function of ITI. The heavy chains of the ITI family, designated as SHAPs (for serum-derived hyaluronan-associated proteins), bind covalently to hyaluronic acid (HA), resulting in pericellular matrix stabilization. ITI-H1 contains a potential peptide which could stimulate a broad spectrum of phagocytotic cells. Although ITI-H1, ITI-H3 and Bikunin have anti-tumoral and antimetastatic properties in the cell, they are also associated with malignant transformation of lung tissue. ITI-H1 and ITI-H2 are associated with calcium oxalate stone formation in kidney and urine.

## CHROMOSOMAL LOCATION

Genetic locus: ITIH1 (human) mapping to 3p21.1; Itih1 (mouse) mapping to 14 B.

## SOURCE

ITI-H1 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ITI-H1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33944 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ITI-H1 (K-16) is recommended for detection of precursor and mature chain of ITI-H1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

ITI-H1 (K-16) is also recommended for detection of precursor and mature chain of ITI-H1 in additional species, including bovine.

Suitable for use as control antibody for ITI-H1 siRNA (h): sc-39595, ITI-H1 siRNA (m): sc-39596, ITI-H1 shRNA Plasmid (h): sc-39595-SH, ITI-H1 shRNA Plasmid (m): sc-39596-SH, ITI-H1 shRNA (h) Lentiviral Particles: sc-39595-V and ITI-H1 shRNA (m) Lentiviral Particles: sc-39596-V.

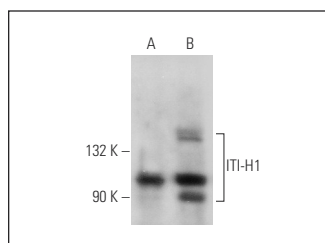
Molecular Weight of ITI-H1: 101 kDa.

Positive Controls: rat thymus extract: sc-2401, mouse thymus extract: sc-2406 or ITI-H1 (m): 293T Lysate: sc-121132.

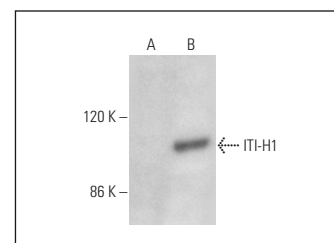
## RECOMMENDED SECONDARY REAGENTS

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



ITI-H1 (K-16): sc-33944. Western blot analysis of ITI-H1 expression in mouse thymus (A) and rat thymus (B) tissue extracts.



ITI-H1 (K-16): sc-33944. Western blot analysis of ITI-H1 expression in non-transfected: sc-117752 (A) and mouse ITI-H1 transfected: sc-121132 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Lauer, M.E., et al. 2009. Airway smooth muscle cells synthesize hyaluronan cable structures independent of inter- $\alpha$ -inhibitor heavy chain attachment. *J. Biol. Chem.* 284: 5313-5323.
- Lauer, M.E., et al. 2013. Irreversible heavy chain transfer to hyaluronan oligosaccharides by tumor necrosis factor-stimulated gene-6. *J. Biol. Chem.* 288: 205-214.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ITI-H1 (F-5): sc-514541** or **ITI-H1 (40B10): sc-69788**, our highly recommended monoclonal alternatives to ITI-H1 (K-16).