

ITI-H1 (T-19): sc-21971

BACKGROUND

The inter- α -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 α 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.

REFERENCES

- Soury, E., et al. 1998. The H4P heavy chain of inter- α -inhibitor family largely differs in the structure and synthesis of its prolin-rich region from rat to human. *Biochem. Biophys. Res. Commun.* 243: 522-530.
- Mizushima, S., et al. 1998. Gene expression of the two heavy chains and one light chain forming the inter- α -trypsin-inhibitor in human tissues. *Biol. Pharm. Bull.* 21: 167-169.
- Bost, F., et al. 1998. Inter- α -trypsin inhibitor proteoglycan family—a group of proteins binding and stabilizing the extracellular matrix. *Eur. J. Biochem.* 252: 339-346.
- Dawson, C.J., et al. 1998. Inter- α -inhibitor in calcium stones. *Clin. Sci.* 95: 187-193.
- Bourguignon, J., et al. 1999. Immunohistochemical distribution of inter- α -trypsin inhibitor chains in normal and malignant human lung tissue. *J. Histochem. Cytochem.* 47: 1625-1632.
- Zhuo, L., et al. 2001. Defect in SHAP-hyaluronan complex causes severe female infertility. A study by inactivation of the bikunin gene in mice. *J. Biol. Chem.* 276: 7693-7696.

CHROMOSOMAL LOCATION

Genetic locus: Itih1 (mouse) mapping to 14 B.

SOURCE

ITI-H1 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ITI-H1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-21971 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ITI-H1 (T-19) is recommended for detection of precursor and mature chain of ITI-H1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

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

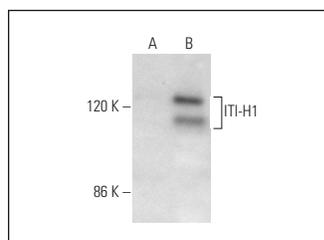
Molecular Weight of ITI-H1: 101 kDa.

Positive Controls: 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 (T-19): sc-21971. 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.

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.