SANTA CRUZ BIOTECHNOLOGY, INC.

ITI-H2 (T-13): sc-33948

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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). A fourth 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-H2 is expressed in the adrenal glands, brain, kidney, lung and liver. Weak but frequent H2 expression is observed in adenocarcinoma cells. ITI-H2 mRNA levels decrease in response to IL-6. ITI-H1 and ITI-H2 are associated with calcium oxalate stone formation in kidney and urine. The human ITI-H2 gene maps to chromosome 10p14.

REFERENCES

1. 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.
2. 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.
3. 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.
4. Dawson, C.J., et al. 1998. Inter-α inhibitor in calcium stones. Clin. Sci. 95: 187-193.
5. 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.
6. 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: ITIH2 (human) mapping to 10p14; Itih2 (mouse) mapping to 2 A1.

SOURCE

ITI-H2 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ITI-H2 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-33948 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ITI-H2 (T-13) is recommended for detection of precursor and mature chain of ITI-H2 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-H2 (T-13) is also recommended for detection of precursor and mature chain of ITI-H2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for ITI-H2 siRNA (h): sc-39597, ITI-H2 siRNA (m): sc-39598, ITI-H2 shRNA Plasmid (h): sc-39597-SH, ITI-H2 shRNA Plasmid (m): sc-39598-SH, ITI-H2 shRNA (h) Lentiviral Particles: sc-39597-V and ITI-H2 shRNA (m) Lentiviral Particles: sc-39598-V.

Molecular Weight of ITI-H2: 75-80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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) 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.

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.