

ITI-H2 (F-20): sc-48225

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 a 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. Sarafan, N., Martin, J.P., Bourguignon, J., Borghi, H., Calle, A., Sesboue, R. and Diarra-Mehrpour, M. 1995. The human inter- α -trypsin inhibitor genes respond differently to interleukin-6 in HepG2 cells. *Eur. J. Biochem.* 227: 808-815.
2. Soury, E., Olivier, E., Daveau, M., Hiron, M., Claeysens, S., Risler, J.L. and Salier, J.P. 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.
3. Mizushima, S., Nii, A., Kato, K. and Uemura, A. 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.
4. Bost, F., Diarra-Mehrpour, M. and Martin, J.P. 1998. Inter- α -trypsin inhibitor proteoglycan family—a group of proteins binding and stabilizing the extracellular matrix. *Eur. J. Biochem.* 252: 339-346.
5. Dawson, C.J., Grover, P.K., Kanellos, J., Pham, H., Kupczyk, G., Oates, A. and Ryall, R.L. 1998. Inter- α -inhibitor in calcium stones. *Clin. Sci.* 95: 187-193.
6. Bourguignon, J., Borghi, H., Sesboue, R., Diarra-Mehrpour, M., Bernaudin, J.F., Metayer, J., Martin, J.P. and Thiberville, L. 1999. Immunohistochemical distribution of inter- α -trypsin inhibitor chains in normal and malignant human lung tissue. *J. Histochem. Cytochem.* 47: 1625-1632.

CHROMOSOMAL LOCATION

Genetic locus: ITIH2 (human) mapping to 10p14; Itih2 (mouse) mapping to 2 A1.

SOURCE

ITI-H2 (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ITI-H2 of human origin.

RESEARCH USE

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

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-48225 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ITI-H2 (F-20) 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 (F-20) is also recommended for detection of precursor and mature chain of ITI-H2 in additional species, including equine and canine.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.