SANTA CRUZ BIOTECHNOLOGY, INC.

ITI-H2 (K-17): sc-21978

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). 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 10p15.

CHROMOSOMAL LOCATION

Genetic locus: Itih2 (mouse) mapping to 2 A1.

SOURCE

ITI-H2 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ITI-H2 of mouse 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-21978 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.

RESEARCH USE

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

APPLICATIONS

ITI-H2 (K-17) is recommended for detection of precursor and mature chain of ITI-H2 of mouse 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).

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

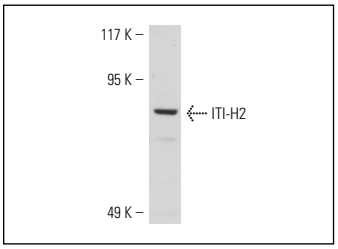
Molecular Weight of ITI-H2: 75-80 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or CTLL-2 cell lysate: sc-2242.

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-H2 (K-17): sc-21978. Western blot analysis of ITI-H2 expression in RAW 264.7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lauer, M.E., et al. 2009. Airway smooth muscle cells synthesize hyaluronan cable structures independent of inter-α-inhibitor heavy chain attachment. J. Biol. Chem. 284: 5313-5323.
2. 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.
3. Swaidani, S., et al. 2013. TSG-6 protein is crucial for the development of pulmonary hyaluronan deposition, eosinophilia, and airway hyperresponsiveness in a murine model of asthma. J. Biol. Chem. 288: 412-422.
4. Lauer, M.E., et al. 2013. Tumor necrosis factor-stimulated gene-6 (TSG-6) amplifies hyaluronan synthesis by airway smooth muscle cells. J. Biol. Chem. 288: 423-431.

PROTOCOLS

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