

ITI-H4 (C-20): sc-21987

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. While the ITI family is primarily composed of multi-polypeptide molecules, ITI-H4 is a single-chain molecule. And unlike other ITI family members, the gene transcriptions and products for rat and human ITIH4 demonstrate marked differences, suggesting possible species-specific functions for ITI-H4. The gene encoding human ITI-H4 maps to chromosome 3p21.1.

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.

CHROMOSOMAL LOCATION

Genetic locus: ITIH4 (human) mapping to 3p21.1.

SOURCE

ITI-H4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ITI-H4 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-21987 P, (100 μ g 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-H4 (C-20) is recommended for detection of full length and 35 kDa fragment of ITI-H4 of human 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-H4 siRNA (h): sc-45402, ITI-H4 shRNA Plasmid (h): sc-45402-SH and ITI-H4 shRNA (h) Lentiviral Particles: sc-45402-V.

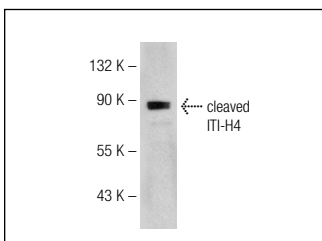
Molecular Weight of ITI-H4: 120 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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-H4 (C-20): sc-21987. Western blot analysis of cleaved ITI-H4 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kim, M.S., et al. 2011. ITI-H4, as a biomarker in the serum of recurrent pregnancy loss (RPL) patients. *Mol. Biosyst.* 7: 1430-1440.

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Try **ITI-H4 (F-9): sc-515353** or **ITI-H4 (G-2): sc-515060**, our highly recommended monoclonal alternatives to ITI-H4 (C-20).