SANTA CRUZ BIOTECHNOLOGY, INC.

# ITI-H4 (G-2): sc-515060

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-HI, ITI-H2 and ITI-H3) and one light chain (Bikunin). Another member of the ITI family, ITI-H4, harbors a proline-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. Unlike other ITI family members, the gene transcriptions and products for rat and human ITI-H4 demonstrate marked differences, suggesting possible species-specific functions for ITI-H4. The gene encoding human ITI-H4 maps to chromosome 3p21.1.

## REFERENCES


1. Bourguignon, J., et al. 1993. Human pre-α-trypsin inhibitor-precursor heavy chain. cDNA and deduced amino-acid sequence. Eur. J. Biochem. 212: 771-776.
2. Sarafan, N., et al. 1995. The human inter-α-trypsin inhibitor genes respond differently to interleukin-6 in Hep G2 cells. Eur. J. Biochem. 227: 808-815.
3. 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.
4. 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.


## CHROMOSOMAL LOCATION

Genetic locus: ITIH4 (human) mapping to 3p21.1; Itih4 (mouse) mapping to 14 B.

## SOURCE

ITI-H4 (G-2) is a mouse monoclonal antibody raised against amino acids 594-802 mapping near the C-terminus of ITI-H4 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ITI-H4 (G-2) is available conjugated to agarose (sc-515060 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515060 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515060 PE), fluorescein (sc-515060 FITC), Alexa Fluor® 488 (sc-515060 AF488), Alexa Fluor® 546 (sc-515060 AF546), Alexa Fluor® 594 (sc-515060 AF594) or Alexa Fluor® 647 (sc-515060 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515060 AF680) or Alexa Fluor® 790 (sc-515060 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## APPLICATIONS

ITI-H4 (G-2) is recommended for detection of ITI-H4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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-H4 siRNA (h): sc-45402, ITI-H4 siRNA (m): sc-45403, ITI-H4 shRNA Plasmid (h): sc-45402-SH, ITI-H4 shRNA Plasmid (m): sc-45403-SH, ITI-H4 shRNA (h) Lentiviral Particles: sc-45402-V and ITI-H4 shRNA (m) Lentiviral Particles: sc-45403-V.

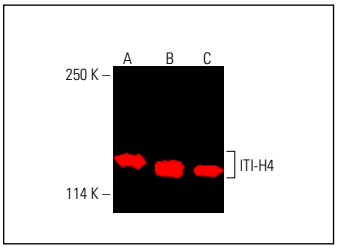
Molecular Weight of ITI-H4: 120 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or c4 whole cell lysate: sc-364186.

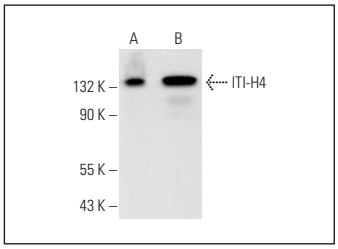
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




ITI-H4 (G-2): sc-515060. Near-Infrared western blot analysis of ITI-H4 expression in HEL 92.1.7 (**A**), HeLa (**B**) and K-562 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-$IgG_1$ BP-CFL 790: sc-533666.




ITI-H4 (G-2): sc-515060. Western blot analysis of ITI-H4 expression in c4 (**A**) and NIH/3T3 (**B**) 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 for detailed protocols and support products.