SANTA CRUZ BIOTECHNOLOGY, INC.

Hic-5 (F-6): sc-137051

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In addition to paxillin, zysin, LPP, Ajuba and TRIP6, hydrogen-peroxide inducible clone 5 (Hic-5) is a member of the LIM family. Hic-5 contains four LIM motifs and seven zinc finger domains. In the cell, Hic-5 localizes to the nuclear matrix and focal adhesion complexes where the LIM domains mediate the interactions of Hic-5 with focal adhesions. Known also as transforming factor β 1 induced transcript 1, Hic-5 shares extensive homology with the structural protein paxillin, which is involved in the regulation of focal adhesion dynamics. Hic-5 inhibits integrin-mediated cell spreading on Fibronectin by out competing paxillin for focal adhesion kinase and thereby preventing downstream signal transduction. Increased expression of Hic-5 leads to cellular senescence in developing fibroblasts. During myogenesis, expression of Hic-5 blocks differentiation and induces apoptosis of developing myoblasts. The gene encoding human Hic-5 maps to chromosome 16.

REFERENCES

1. Shibanuma, M., et al. 1993. Cloning from a mouse osteoblastic cell line of a set of transforming growth factor β-1-regulated genes, one of which seems to encode a follistatin-related polypeptide. Eur. J. Biochem. 217: 13-19.
2. Shibanuma, M., et al. 1994. Characterization of the TGF β 1-inducible Hic-5 gene that encodes a putative novel zinc finger protein and its possible involvement in cellular senescence. J. Biol. Chem. 269: 26767-26774.
3. Shibanuma, M., et al. 1997. Induction of senescence-like phenotypes by forced expression of Hic-5, which encodes a novel LIM motif protein, in immortalized human fibroblasts. Mol. Cell. Biol. 17: 1224-1235.
4. Matsuya, M., et al. 1998. Cell adhesion kinase forms a complex with a new member, Hic-5, of proteins localized at focal adhesions. J. Biol. Chem. 273: 1003-1014.
5. Fujita, H., et al. 1998. Interaction of Hic-5, a senescence-related protein, with focal adhesion kinase. J. Biol. Chem. 273: 26516-26521.

CHROMOSOMAL LOCATION

Genetic locus: TGFB1I1 (human) mapping to 16p11.2; Tgfb1i1 (mouse) mapping to 7 F3.

SOURCE

Hic-5 (F-6) is a mouse monoclonal antibody raised against amino acids 1-75 mapping at the N-terminus of Hic-5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-137051 X, 200 µg/0.1 ml.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Hic-5 (F-6) is recommended for detection of Hic-5 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), immunohistochemistry (including paraffin-embedded sections) (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 Hic-5 siRNA (h): sc-37685, Hic-5 siRNA (m): sc-37686, Hic-5 shRNA Plasmid (h): sc-37685-SH, Hic-5 shRNA Plasmid (m): sc-37686-SH, Hic-5 shRNA (h) Lentiviral Particles: sc-37685-V and Hic-5 shRNA (m) Lentiviral Particles: sc-37686-V.

Hic-5 (F-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

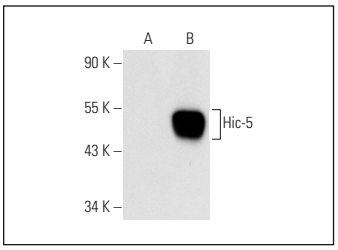
Molecular Weight of Hic-5: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hic-5 (m): 293T Lysate: sc-126953.

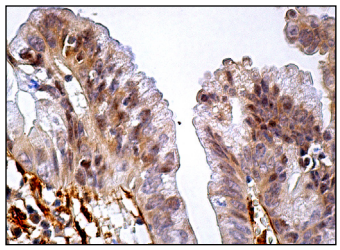
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Hic-5 (F-6): sc-137051. Western blot analysis of Hic-5 expression in non-transfected: sc-117752 (**A**) and mouse Hic-5 transfected: sc-126953 (**B**) 293T whole cell lysates.



Hic-5 (F-6): sc-137051. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells.

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.