

## Hic-5 (D-15): sc-30972

### BACKGROUND

In addition to paxillin, zysin, LPP, ajuba and trip-6, 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  $\beta$  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 16p11.2.

### REFERENCES

- Shibanuma, M., et al. 1993. Cloning from a mouse osteoblastic cell line of a set of transforming-growth-factor- $\beta$ -1-regulated genes, one of which seems to encode a follistatin-related polypeptide. *Eur. J. Biochem.* 217: 13-19.
- Shibanuma, M., et al. 1994. Characterization of the TGF $\beta$ 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.
- 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.
- Fujita, H., et al. 1998. Interaction of Hic-5, a senescence-related protein, with focal adhesion kinase. *J. Biol. Chem.* 273: 26516-26521.
- 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.

### CHROMOSOMAL LOCATION

Genetic locus: TGFB111 (human) mapping to 16p11.2; Tgfb11 (mouse) mapping to 7 F3.

### SOURCE

Hic-5 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Hic-5 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30972 P, (100  $\mu$ 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.

### APPLICATIONS

Hic-5 (D-15) is recommended for detection of Hic-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Hic-5 (D-15) is also recommended for detection of Hic-5 in additional species, including equine, canine, bovine and porcine.

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.

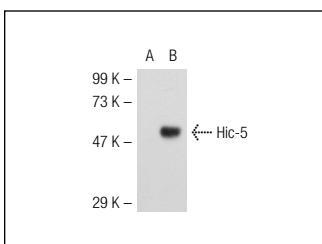
Molecular Weight of Hic-5: 55 kDa.

Positive Controls: Hic-5 (m): 293T Lysate: sc-126953.

### 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



Hic-5 (D-15): sc-30972. 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.

### RESEARCH USE

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

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Try **Hic-5 (C-6): sc-271353** or **Hic-5 (F-6): sc-137051**, our highly recommended monoclonal alternatives to Hic-5 (D-15).