

Hic-5 (H-1): sc-271447

BACKGROUND

In addition to paxillin, zysyn, 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 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

- 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.
- 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.
- 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.
- 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.
- 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: TGFBI1 (human) mapping to 16p11.2; Tgfb1i1 (mouse) mapping to 7 F3.

SOURCE

Hic-5 (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 409-434 near the C-terminus of Hic-5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ 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-271447 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-271447 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Hic-5 (H-1) 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 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).

Hic-5 (H-1) is also recommended for detection of Hic-5 in additional species, including equine, canine and bovine.

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 (H-1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

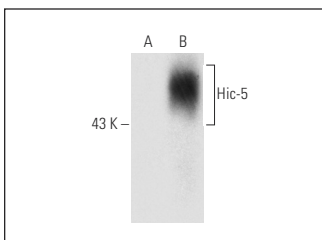
Molecular Weight of Hic-5: 55 kDa.

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

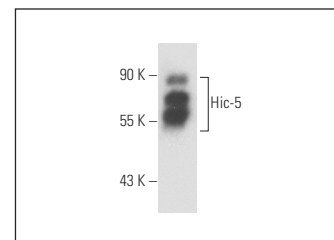
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Hic-5 (H-1): sc-271447. 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 (H-1): sc-271447. Western blot analysis of Hic-5 expression in HeLa whole cell lysate.

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.