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# Hic-5 (m): 293T Lysate: sc-126953

## BACKGROUND

In addition to paxillin, zysyn, 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  $\beta$ 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.
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- Fujita, H., et al. 1998. Interaction of Hic-5, a senescence-related protein, with focal adhesion kinase. *J. Biol. Chem.* 273: 26516-26521.
- Thomas, S.M., et al. 1999. Characterization of a focal adhesion protein, Hic-5, that shares extensive homology with paxillin. *J. Cell Sci.* 112: 181-190.
- Hu, Y., et al. 1999. Lepidopteran DALP, and its mammalian ortholog Hic-5, function as negative regulators of muscle differentiation. *Proc. Natl. Acad. Sci. USA* 96: 10218-10223.
- Nishiya, N., et al. 2001. Hic-5-reduced cell spreading on Fibronectin: competitive effects between paxillin and Hic-5 through interaction with focal adhesion kinase. *Mol. Cell. Biol.* 21: 5332-5345.
- Wang, Y., et al. 2001. LIM domain protein TRIP6 has a conserved nuclear export signal, nuclear targeting sequences, and multiple transactivation domains. *Biochim. Biophys. Acta* 1538: 260-272.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## CHROMOSOMAL LOCATION

Genetic locus: Tgfb1i1 (mouse) mapping to 7 F3.

## PRODUCT

Hic-5 (m): 293T Lysate represents a lysate of mouse Hic-5 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

Hic-5 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Hic-5 antibodies. Recommended use: 10-20  $\mu$ l per lane.

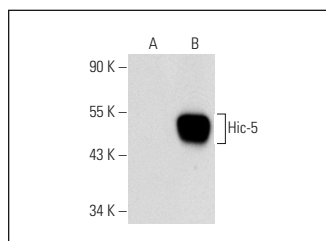
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Hic-5 (F-6): sc-137051 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Hic-5 expression in Hic-5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

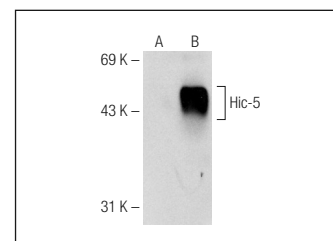
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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.

## 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 (C-6): sc-271353. 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.