Revision 1

#4914 Store at -20C

Hic-5 Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

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Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H Mk B	Endogenous	50	Rabbit	#O43294	7041

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Hic-5 Antibody detects endogenous levels of total Hic-5/ARA55 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala104 of human Hic-5. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Hic-5 is a LIM domain family member orginally identified as a TGFbeta1 and hydrogen peroxide inducible gene, and is nearly identical to the androgen receptor co-activator ARA55 (1-3). Hic-5 is structurally related to paxillin, and both proteins are localized to focal adhesions and thought to serve as adaptor molecules, linking signals from the extracellular matrix to cytoskeletal regulation and intracelluar signaling (4,5). Like paxillin, Hic-5 contains four LD motifs and four LIM domains. Expression of Hic-5 can affect cell growth and differentiation (6-8). Increased expression of Hic-5 is observed during cellular senescence in fibroblasts, and ectopic expression in immortalized fibroblasts suppressed cell growth (8). Unlike paxillin, Hic-5 may translocate to the nucleus in response to oxidants like hydrogen peroxide (9). It has been proposed that Hic-5 serves to shuttle redox signaling from focal adhesions to the nucleus where it acts as a transcriptional co-activator for some transciption factors including, Sp1 and PPARgamma (7,9,10). Phosphorylation of Hic-5 at Tyr60 by CAKbeta and Fyn may activiate Hic-5 signaling by allowing binding to downstream SH2 domain containing proteins (11).

Background References

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6. Hu, Y. et al. (1999) *Proc Natl Acad Sci U S A* 96, 10218-23.
7. Drori, S. et al. (2005) *Genes Dev* 19, 362-75.
8. Shibanuma, M. et al. (1997) *Mol Cell Biol* 17, 1224-35.
9. Shibanuma, M. et al. (2003) *Mol Biol Cell* 14, 1158-71.
10. Shibanuma, M. et al. (2004) *J Cell Biochem* 91, 633-45.
11. Ishino, M. et al. (2000) *FEBS Lett* 474, 179-83.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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