



HIRIP3 (M-12): sc-109279

BACKGROUND

The HIRIP3 (HIRA interacting protein 3) locus encodes for a 556 amino acid protein that directly interacts with the HIRA histone chaperone. It also interacts weakly with core histones, Histone H2B and Histone H3. HIRIP3 is a heavily phosphorylated nuclear protein and it is found throughout the cell cycle. It is phosphorylated by casein kinase II. HIRIP3 may play a role in chromatin function and histone metabolism. A region (approximately 60 amino acids in length) at the C-terminus of HIRIP3 is highly conserved among vertebrates and it contains residues that are invariantly charged, polar and hydrophobic. Two isoforms of HIRIP3 exist due to alternative splicing. Isoform 1 is predominantly expressed in skeletal muscles and isoform 2 is expressed in the liver and the heart. Human HIRA homologs are thought to be responsible for the DiGeorge syndrome and related developmental disorders.

REFERENCES

- Lorain, S., Quivy, J.P., Monier-Gavelle, F., Scamps, C., Lécluse, Y., Almouzni, G. and Lipinski, M. 1998. Core histones and HIRIP3, a novel histone-binding protein, directly interact with WD repeat protein HIRA. *Mol. Cell. Biol.* 18: 5546-5556.
- Magnaghi, P., Roberts, C., Lorain, S., Lipinski, M. and Scambler, P.J. 1998. HIRA, a mammalian homologue of *Saccharomyces cerevisiae* transcriptional co-repressors, interacts with Pax3. *Nat. Genet.* 20: 74-77.
- Online Mendelian Inheritance in Man, OMIM™. 1998. John Hopkins University, Baltimore, MD. MIM Number: 603365. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Lorain, S., Lécluse, Y., Scamps, C., Mattéi, M.G. and Lipinski, M. 2001. Identification of human and mouse HIRA-interacting protein-5 (HIRIP5), two mammalian representatives in a family of phylogenetically conserved proteins with a role in the biogenesis of Fe/S proteins. *Biochim. Biophys. Acta* 1517: 376-383.
- Ahmad, A., Kikuchi, H., Takami, Y. and Nakayama, T. 2005. Different roles of N-terminal and C-terminal halves of HIRA in transcription regulation of cell cycle-related genes that contribute to control of vertebrate cell growth. *J. Biol. Chem.* 280: 32090-32100.
- Frith, M.C., Ponjavic, J., Fredman, D., Kai, C., Kawai, J., Carninci, P., Hayashizaki, Y., Hayshizaki, Y. and Sandelin, A. 2006. Evolutionary turnover of mammalian transcription start sites. *Genome Res.* 16: 713-722.
- Luk, E., Vu, N.D., Patteson, K., Mizuguchi, G., Wu, W.H., Ranjan, A., Backus, J., Sen, S., Lewis, M., Bai, Y. and Wu, C. 2007. Chz1, a nuclear chaperone for Histone H2AZ. *Mol. Cell* 25: 357-368.
- Assrir, N., Filhol, O., Galisson, F. and Lipinski, M. 2007. HIRIP3 is a nuclear phosphoprotein interacting with and phosphorylated by the serine-threonine kinase CK2. *Biol. Chem.* 388: 391-398.
- SWISS-PROT/TrEMBL (Q9BW71). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: HIRIP3 (human) mapping to 16p11.2; Hirip3 (mouse) mapping to 7 F3.

SOURCE

HIRIP3 (M-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HIRIP3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109279 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HIRIP3 (M-12) is recommended for detection of HIRIP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for HIRIP3 siRNA (h): sc-93460, HIRIP3 siRNA (m): sc-145972, HIRIP3 shRNA Plasmid (h): sc-93460-SH, HIRIP3 shRNA Plasmid (m): sc-145972-SH, HIRIP3 shRNA (h) Lentiviral Particles: sc-93460-V and HIRIP3 shRNA (m) Lentiviral Particles: sc-145972-V.

Molecular Weight (predicted) of HIRIP3: 62 kDa.

Molecular Weight (observed) of HIRIP3: 90 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132.

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) 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.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.