SANTA CRUZ BIOTECHNOLOGY, INC.

HiNF-P (A-19): sc-49818

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HiNF-P is a critial transcription factor which is necessay for E2F-independent activation of the Histone H4 multigene family. HiNF-P associates with conserved H4 cell cycle regulatory sequences *in vivo*. Antisense inhibition of HiNF-P reduces endogenous Histone H4 gene expression. HiNF-P utilizes NPAT/p220, a substrate of the cyclin E/cyclin-dependent kinase 2 (CDK2) kinase complex, as a crucial coactivator to amplify Histone H4 gene transcription. The biological role of HiNF-P is reflected by impeded cell cycle progression into S phase upon antisense-mediated reduction of HiNF-P levels. Research indicates that HiNF-P is the key link in a linear signaling pathway that is initiated with the growth factor-dependent induction of cyclin E/CDK2 kinase activity at the restriction point and culminates in the activation of Histone H4 genes through HiNF-P at the G_1/S phase transition.

REFERENCES

1. van Wijnen, A.J., et al. 1991. Transcriptional element H4-site II of cell cycle regulated human H4 Histone genes is a multipartite protein/DNA interaction site for factors HiNF-D, HiNF-M, and HiNF-P: involvement of phosphorylation. J. Cell. Biochem. 46: 174-189.
2. van den Ent, F.M., et al. 1993. Concerted control of multiple histone promoter factors during cell density inhibition of proliferation in osteosarcoma cells: reciprocal regulation of cell cycle-controlled and bone-related genes. Cancer Res. 53: 2399-2409.
3. Aziz, F., et al. 1998. HiNF-D (CDP-cut/CDC2 cell cycle activation of human Histone H4 gene transcription at the G_1/S phase transition. J. Cell. Physiol. 177: 453-464.
4. Aziz, F., et al. 1998. The integrated activities of IRF-2 (HiNF-M), CDP/cut (HiNF-D) and H4TF-2 (HiNF-P) regulate transcription of a cell cycle controlled human Histone H4 gene: mechanistic differences between distinct H4 genes. Mol. Biol. Rep. 25: 1-12.
5. Hovhannisyan, H., et al. 2003. Maintenance of open chromatin and selective genomic occupancy at the cell cycle-regulated Histone H4 promoter during differentiation of HL-60 promyelocytic leukemia cells. Mol. Cell. Biol. 23: 1460-1469.

CHROMOSOMAL LOCATION

Genetic locus: HINFP (human) mapping to 11q23.3; Hinfp (mouse) mapping to 9 A5.2.

SOURCE

HiNF-P (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HiNF-P of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-49818 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-49818 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HiNF-P (A-19) is recommended for detection of HiNF-P of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

HiNF-P (A-19) is also recommended for detection of HiNF-P in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HiNF-P siRNA (h): sc-60790, HiNF-P siRNA (m): sc-60791, HiNF-P shRNA Plasmid (h): sc-60790-SH, HiNF-P shRNA Plasmid (m): sc-60791-SH, HiNF-P shRNA (h) Lentiviral Particles: sc-60790-V and HiNF-P shRNA (m) Lentiviral Particles: sc-60791-V.

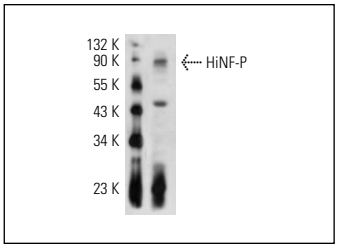
HiNF-P (A-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HiNF-P: 65 kDa.

Molecular Weight of ubiquitinated HiNF-P: 83-109 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or mouse brain extract: sc-2253.

DATA



HiNF-P (A-19): sc-49818. Western blot analysis of HiNF-P expression in mouse brain tissue extract.

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.