

## HiNF-P (H-207): sc-292278

### BACKGROUND

HiNF-P is a critical transcription factor which is necessary 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<sub>1</sub>/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<sub>1</sub>/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. Hovhannisyann, 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 (H-207) is a rabbit polyclonal antibody raised against amino acids 64-270 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-292278 X, 200 µg/0.1 ml.

### RESEARCH USE

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

### APPLICATIONS

HiNF-P (H-207) 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 (H-207) is also recommended for detection of HiNF-P in additional species, including equine, canine, bovine and porcine.

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 (H-207) 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.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

### PROTOCOLS

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

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Try **HiNF-P (C-5): sc-373855**, our highly recommended monoclonal alternative to HiNF-P (H-207).