

# HP1 $\alpha$ (h): 293 Lysate: sc-110608

## BACKGROUND

Chromatin assembly factor-1 (CAF-1) is a multisubunit protein complex that comprises three polypeptide subunits known as p150, p60 and p48. CAF-1 is a nucleosome assembly factor that deposits newly synthesized and acetylated histones H3/H4 into nascent chromatin during DNA replication. The p150 subunit of CAF-1 also supports the maintenance of heterochromatin, which requires the synthesis of both new histones and heterochromatin proteins and their orderly assembly during DNA replication. Heterochromatin is characterized as densely coiled chromatin that generally replicates late during S phase, has a low gene density and contains large blocks of repetitive DNA that is relatively inaccessible to DNA-modifying reagents. In late S phase, p150 directly associates with heterochromatin associated proteins 1 (HP1 $\alpha$ , HP1 $\beta$  and HP1 $\gamma$ ). As cells prepare for mitosis, CAF-1 p150 and some HP1 progressively dissociate from heterochromatin, coinciding with the phosphorylation of Histone H3. The HP1 proteins reassociate with chromatin at the end of mitosis as Histone H3 is dephosphorylated.

## REFERENCES

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- Murzina, N., Verreault, A., Laue, E. and Stillman, B. 1999. Heterochromatin dynamics in mouse cells: interaction between chromatin assembly factor 1 and HP1 proteins. *Mol. Cell* 4: 529-540.
- Koike, N., Maita, H., Taira, T., Ariga, H. and Iguchi-Ariga, S.M. 2000. Identification of heterochromatin protein 1 (HP1) as a phosphorylation target by Pim-1 kinase and the effect of phosphorylation on the transcriptional repression function of HP1. *FEBS Lett.* 467: 17-21.

## CHROMOSOMAL LOCATION

Genetic locus: CBX5 (human) mapping to 12q13.13.

## PRODUCT

HP1 $\alpha$  (h): 293 Lysate represents a lysate of human HP1 $\alpha$  transfected 293 cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

HP1 $\alpha$  (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive HP1 $\alpha$  antibodies. Recommended use: 10-20  $\mu$ l per lane.

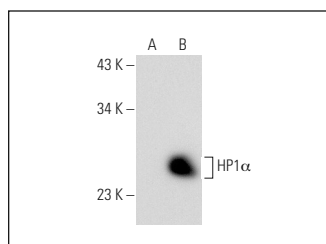
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

HP1 $\alpha$  (GA-62): sc-130446 is recommended as a positive control antibody for Western Blot analysis of enhanced human HP1 $\alpha$  expression in HP1 $\alpha$  transfected 293 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



HP1 $\alpha$  (GA-62): sc-130446. Western blot analysis of HP1 $\alpha$  expression in non-transfected: sc-117752 (A) and human HP1 $\alpha$  transfected: sc-110608 (B) 293 whole cell lysates.

## 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.

## PROTOCOLS

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