

CAF-1 p60 (SS 24 1-68): sc-56645

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 α , HP1 β and HP1 γ). 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

- Smith, S., et al. 1989. Purification and characterization of CAF-1, a human cell factor required for chromatin assembly during DNA replication *in vitro*. Cell 58: 15-25.
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- Verreault, A., et al. 1996. Nucleosome assembly by a complex of CAF-1 and acetylated histones H3/H4. Cell 87: 95-104.
- Minc, E., et al. 1999. Localization and phosphorylation of HP1 proteins during the cell cycle in mammalian cells. Chromosoma 108: 220-234.
- Taddei, A., et al. 1999. Duplication and maintenance of heterochromatin domains. J. Cell Biol. 147: 1153-1166.
- Murzina, N., et al. 1999. Heterochromatin dynamics in mouse cells: interaction between CAF-1 and HP1 proteins. Mol. Cell. 4: 529-540.
- Koike, N., et al. 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 Letts. 467: 17-21.

CHROMOSOMAL LOCATION

Genetic locus: CHAF1B (human) mapping to 21q22.13.

SOURCE

CAF-1 p60 (SS 24 1-68) is a mouse monoclonal antibody raised against full length CAF-1 p60 of human origin.

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.

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CAF-1 p60 (SS 24 1-68) is recommended for detection of CAF-1 p60 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CAF-1 p60 siRNA (h): sc-37735, CAF-1 p60 shRNA Plasmid (h): sc-37735-SH and CAF-1 p60 shRNA (h) Lentiviral Particles: sc-37735-V.

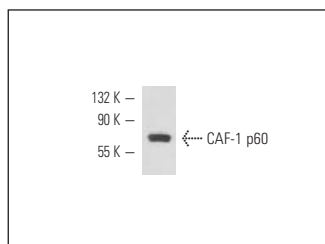
Molecular Weight of CAF-1 p60: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or Jurkat nuclear extract: sc-2132.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



Western blot analysis of CAF-1 p60 expression in HeLa nuclear extract immunoprecipitated with CAF-1 p60 (SS 24 1-68): sc-56645 and detected with CAF-1 p60 (SS 53): sc-56646.

PROTOCOLS

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