SANTA CRUZ BIOTECHNOLOGY, INC.

CAF-1 p60 (B-10): sc-393662

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (HP1α, HP1β and HP1γ). 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

1. Smith, S., et al. 1989. Purification and characterization of CAF-I, a human cell factor required for chromatin assembly during DNA replication *in vitro*. Cell 58: 15-25.
2. Kaufman, P.D., et al. 1995. The p150 and p60 subunits of chromatin assembly factor I: a molecular link between newly synthesized histones and DNA replication. Cell 81: 1105-1114.
3. Verreault, A., et al. 1996. Nucleosome assembly by a complex of CAF-1 and acetylated histones H3/H4. Cell 87: 95-104.

CHROMOSOMAL LOCATION

Genetic locus: CHAF1B (human) mapping to 21q22.12; Chaf1b (mouse) mapping to 16 C4.

SOURCE

CAF-1 p60 (B-10) is a mouse monoclonal antibody raised against amino acids 1-80 mapping at the N-terminus of CAF-1 p60 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CAF-1 p60 (B-10) is available conjugated to agarose (sc-393662 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393662 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393662 PE), fluorescein (sc-393662 FITC), Alexa Fluor® 488 (sc-393662 AF488), Alexa Fluor® 546 (sc-393662 AF546), Alexa Fluor® 594 (sc-393662 AF594) or Alexa Fluor® 647 (sc-393662 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393662 AF680) or Alexa Fluor® 790 (sc-393662 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CAF-1 p60 (B-10) is recommended for detection of CAF-1 p60 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CAF-1 p60 siRNA (h): sc-37735, CAF-1 p60 siRNA (m): sc-37736, CAF-1 p60 shRNA Plasmid (h): sc-37735-SH, CAF-1 p60 shRNA Plasmid (m): sc-37736-SH, CAF-1 p60 shRNA (h) Lentiviral Particles: sc-37735-V and CAF-1 p60 shRNA (m) Lentiviral Particles: sc-37736-V.

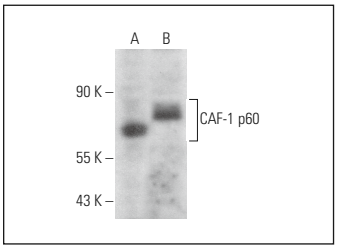
Molecular Weight of CAF-1 p60: 60 kDa.

Positive Controls: F9 cell lysate: sc-2245, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

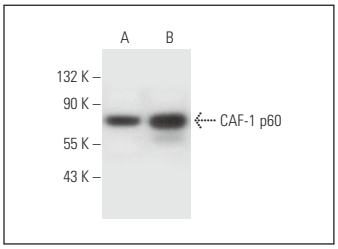
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CAF-1 p60 (B-10): sc-393662. Western blot analysis of CAF-1 p60 expression in Jurkat (**A**) and F9 (**B**) whole cell lysates.



CAF-1 p60 (B-10): sc-393662. Western blot analysis of CAF-1 p60 expression in HeLa (**A**) and Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cheloufi, S., et al. 2015. The histone chaperone CAF-1 safeguards somatic cell identity. Nature 528: 218-224.
2. Franklin, R., et al. 2022. Regulation of chromatin accessibility by the histone chaperone CAF-1 sustains lineage fidelity. Nat. Commun. 13: 2350.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.