

# CAF-1 p150 (D-1): sc-133105

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: CHAF1A (human) mapping to 19p13.3.

## SOURCE

CAF-1 p150 (D-1) is a mouse monoclonal antibody raised against amino acids 1-200 of CAF-1 p150 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CAF-1 p150 (D-1) is available conjugated to agarose (sc-133105 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133105 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133105 PE), fluorescein (sc-133105 FITC), Alexa Fluor<sup>®</sup> 488 (sc-133105 AF488), Alexa Fluor<sup>®</sup> 546 (sc-133105 AF546), Alexa Fluor<sup>®</sup> 594 (sc-133105 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-133105 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-133105 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-133105 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

CAF-1 p150 (D-1) is recommended for detection of CAF-1 p150 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 p150 siRNA (h): sc-29876, CAF-1 p150 shRNA Plasmid (h): sc-29876-SH and CAF-1 p150 shRNA (h) Lentiviral Particles: sc-29876-V.

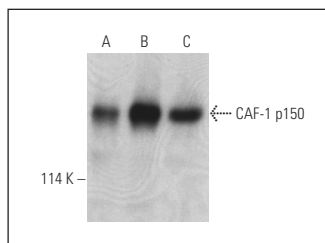
Molecular Weight of CAF-1 p150: 150 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat nuclear extract: sc-2132 or MOLT-4 cell lysate: sc-2233.

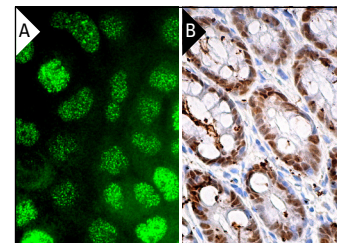
## RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CAF-1 p150 (D-1): sc-133105. Western blot analysis of CAF-1 p150 expression in K-562 (A) and Jurkat (B) nuclear extracts and MOLT-4 whole cell lysate (C). Detection reagent used: m-IgG<sub>2b</sub> BP-HRP: sc-542741.



CAF-1 p150 (D-1): sc-133105. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Huang, T.H., et al. 2018. The histone chaperones ASF1 and CAF-1 promote MMS22L-TONSL-mediated Rad51 loading onto ssDNA during homologous recombination in human cells. *Mol. Cell* 69: 879-892.e5.
- Huang, T.H., et al. 2018. The histone chaperone ASF1 regulates the activation of ATM and DNA-PK<sub>CS</sub> in response to DNA double-strand breaks. *Cell Cycle* 17: 1413-1424.

## 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](http://www.scbt.com) for detailed protocols and support products.

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