

# CDK2AP1 (H-4): sc-390283

## BACKGROUND

CDK2AP1 (also designated p12 and DOC-1) is a growth suppressor that binds to and inhibits DNA pol  $\alpha$ /primase. When bound, CDK2AP1 affects the initiation step, but not the elongation phase, of replication. CDK2AP1 also binds to cyclin-dependent kinase 2 (Cdk2) and targets it for proteolysis. CDK2AP1 promotes cell cycle arrest by regulating the S phase of the cycle, and may trigger apoptosis. The growth factor TGF $\beta$ 1 transcriptionally-induces CDK2AP1 expression, which, in turn, mediates the growth inhibitory activity of TGF $\beta$ 1 by modulating Cdk2 activities and pRB phosphorylation. Due to its ability to trigger apoptosis, CDK2AP1 may be a good candidate for a tumor suppressor in oral cancer.

## CHROMOSOMAL LOCATION

Genetic locus: CDK2AP1 (human) mapping to 12q24.31; Cdk2ap1 (mouse) mapping to 5 F.

## SOURCE

CDK2AP1 (H-4) is a mouse monoclonal antibody raised against amino acids 20-76 mapping within an internal region of CDK2AP1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CDK2AP1 (H-4) is available conjugated to agarose (sc-390283 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390283 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390283 PE), fluorescein (sc-390283 FITC), Alexa Fluor<sup>®</sup> 488 (sc-390283 AF488), Alexa Fluor<sup>®</sup> 546 (sc-390283 AF546), Alexa Fluor<sup>®</sup> 594 (sc-390283 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-390283 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-390283 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-390283 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

CDK2AP1 (H-4) is recommended for detection of CDK2AP1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CDK2AP1 siRNA (h): sc-60343, CDK2AP1 siRNA (m): sc-60344, CDK2AP1 shRNA Plasmid (h): sc-60343-SH, CDK2AP1 shRNA Plasmid (m): sc-60344-SH, CDK2AP1 shRNA (h) Lentiviral Particles: sc-60343-V and CDK2AP1 shRNA (m) Lentiviral Particles: sc-60344-V.

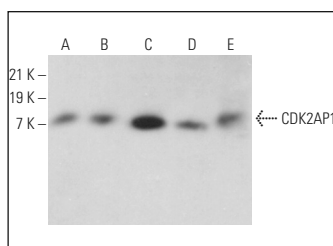
Molecular Weight of CDK2AP1: 12 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-10 cell lysate: sc-3806 or AN3 CA cell lysate: sc-24662.

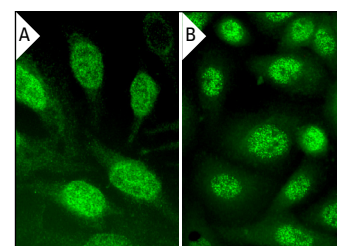
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



CDK2AP1 (H-4): sc-390283. Western blot analysis of CDK2AP1 expression in HeLa (A), A-10 (B), AN3 CA (C) and 3T3-L1 (D) whole cell lysates and human umbilical tissue extract (E).



CDK2AP1 (H-4): sc-390283. Immunofluorescence staining of methanol-fixed HeLa (A) and SW480 (B) cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

- Afonso, M.B., et al. 2018. miRNA-21 ablation protects against liver injury and necroptosis in cholestasis. *Cell Death Differ.* 25: 857-872.
- Mor, N., et al. 2018. Neutralizing Gatad2a-Chd4-Mbd3/NuRD complex facilitates deterministic induction of naive pluripotency. *Cell Stem Cell* 23: 412-425.e10.
- Modzelewski, A.J., et al. 2021. A mouse-specific retrotransposon drives a conserved CDK2AP1 isoform essential for development. *Cell* 184: 5541-5558.e22.

## 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.