

# CdcA4 (1): sc-101509

## BACKGROUND

The eukaryotic cell division cycle consists of a number of gene-controlled sequences that involve cyclin dependent kinases (Cdks) and cell division cycle (Cdc) proteins. CdcA4 (cell division cycle associated 4), also known as HEPP (hematopoietic progenitor protein), is a 241 amino acid protein that contains one SERTA domain and belongs to the E2F family of transcription factors. Localized to the nucleus, CdcA4 participates in the E2F/retinoblastoma pathway and regulates E2F-dependent transcriptional activation and cell proliferation. Additionally, CdcA4 is thought to be involved in spindle pole organization, possibly acting as a midzone factor involved in cytokinesis and chromosome segregation. CdcA4 can also regulate JUN oncogene expression, suggesting a role for CdcA4 in cellular transformation events that lead to tumor development. Multiple isoforms of CdcA4 exist due to alternative splicing events.

## REFERENCES

1. Abdullah, J.M., et al. 2001. Cloning and characterization of HEPP, a novel gene expressed preferentially in hematopoietic progenitors and mature blood cells. *Blood Cells Mol. Dis.* 27: 667-676.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 612270. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Brandenberger, R., et al. 2004. Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation. *Nat. Biotechnol.* 22: 707-716.
4. Bennetts, J.S., et al. 2006. Evolutionary conservation and murine embryonic expression of the gene encoding the SERTA domain-containing protein CdcA4 (HEPP). *Gene* 374: 153-165.

## CHROMOSOMAL LOCATION

Genetic locus: CDCA4 (human) mapping to 14q32.33; Cdca4 (mouse) mapping to 12 F1.

## SOURCE

CdcA4 (1) is a mouse monoclonal antibody raised against recombinant CdcA4 of human origin.

## PRODUCT

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

CdcA4 (1) is available conjugated to agarose (sc-101509 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101509 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101509 PE), fluorescein (sc-101509 FITC), Alexa Fluor® 488 (sc-101509 AF488), Alexa Fluor® 546 (sc-101509 AF546), Alexa Fluor® 594 (sc-101509 AF594) or Alexa Fluor® 647 (sc-101509 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-101509 AF680) or Alexa Fluor® 790 (sc-101509 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

CdcA4 (1) is recommended for detection of CdcA4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 CdcA4 siRNA (h): sc-72841, CdcA4 siRNA (m): sc-72842, CdcA4 shRNA Plasmid (h): sc-72841-SH, CdcA4 shRNA Plasmid (m): sc-72842-SH, CdcA4 shRNA (h) Lentiviral Particles: sc-72841-V and CdcA4 shRNA (m) Lentiviral Particles: sc-72842-V.

Molecular Weight (predicted) of CdcA4: 26 kDa.

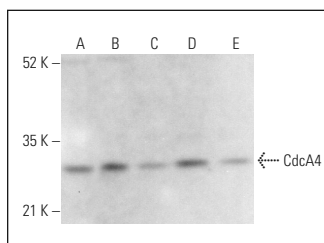
Molecular Weight (observed) of CdcA4: 30-32 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, c4 whole cell lysate: sc-364186 or COLO 205 whole cell lysate: sc-364177.

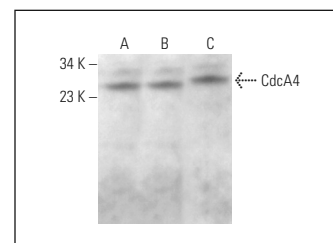
## RECOMMENDED SUPPORT REAGENTS

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).

## DATA



CdcA4 (1): sc-101509. Western blot analysis of CdcA4 expression in c4 (A), COLO 205 (B), Jurkat (C), K-562 (D) and 3T3-L1 (E) whole cell lysates.



CdcA4 (1): sc-101509. Western blot analysis of CdcA4 expression in c4 (A), COLO 205 (B) and K-562 (C) whole cell lysates.

## 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.