

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_{2b} 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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

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.

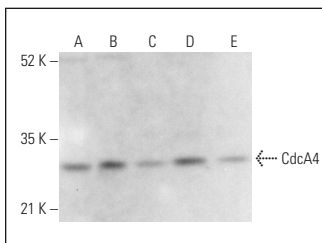
Molecular Weight (observed) of CdcA4: 30-32 kDa.

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

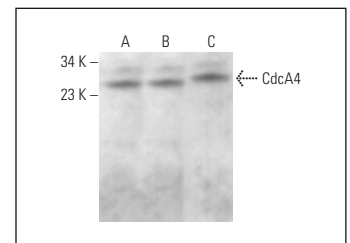
RECOMMENDED SUPPORT REAGENTS

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 for detailed protocols and support products.