SANTA CRUZ BIOTECHNOLOGY, INC.

CdcA4 (E-6): sc-514280

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.
5. Hayashi, R., et al. 2006. CDCA4 is an E2F transcription factor family-induced nuclear factor that regulates E2F-dependent transcriptional activation and cell proliferation. J. Biol. Chem. 281: 35633-35648.

CHROMOSOMAL LOCATION

Genetic locus: Cdca4 (mouse) mapping to 12 F1.

SOURCE

CdcA4 (E-6) is a mouse monoclonal antibody raised against amino acids 67-228 mapping within an internal region of CdcA4 of mouse 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.

CdcA4 (E-6) is available conjugated to agarose (sc-514280 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514280 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514280 PE), fluorescein (sc-514280 FITC), Alexa Fluor® 488 (sc-514280 AF488), Alexa Fluor® 546 (sc-514280 AF546), Alexa Fluor® 594 (sc-514280 AF594) or Alexa Fluor® 647 (sc-514280 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514280 AF680) or Alexa Fluor® 790 (sc-514280 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CdcA4 (E-6) is recommended for detection of CdcA4 of mouse 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 CdcA4 siRNA (m): sc-72842, CdcA4 shRNA Plasmid (m): sc-72842-SH and CdcA4 shRNA (m) Lentiviral Particles: sc-72842-V.

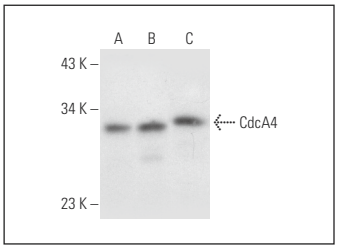
Molecular Weight of CdcA4: 26 kDa.

Positive Controls: Sol8 nuclear extract: sc-2157, F9 cell lysate: sc-2245 or c4 whole cell lysate: sc-364186.

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



CdcA4 (E-6): sc-514280. Western blot analysis of CdcA4 expression in Sol8 nuclear extract (**A**) and F9 (**B**) and c4 (**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.