

cyclin A (V-18): sc-31085

BACKGROUND

The critical role that the family of regulatory proteins known as cyclins play in eukaryotic cell cycle regulation is well established. The best-characterized cyclin complex is the mitotic cyclin B/Cdc2 p34 kinase, the active component of maturing promoting factor. Cyclin A accumulates prior to cyclin B in the cell cycle, appears to be involved in control of S phase and has been shown to associate with cyclin-dependent kinase-2 (Cdk2). In addition, cyclin A has been implicated in cell transformation and is found in complexes with E1A, transcription factors DRTF1 and E2F and retinoblastoma protein, p110. A second form of cyclin A, named cyclin A1 because of its high sequence homology to *Xenopus* cyclin A1, is most highly expressed in germ cells. It has been proposed that cyclin A1 can associate with Cdk2, p39 and Cdc2 p34.

REFERENCES

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2. Giordano, A., et al. 1989. A 60 kDa Cdc2-associated polypeptide complexes with the E1A proteins in adenovirus-infected cells. *Cell* 58: 981-990.
3. Gautier, J., et al. 1990. Cyclin is a component of maturation-promoting factor from *Xenopus*. *Cell* 60: 487-494.
4. Wang, J., et al. 1990. Hepatitis B virus integration in a cyclin A gene in a hepatocellular carcinoma. *Nature* 343: 555-557.
5. Pines, J., et al. 1990. Human cyclin A is adenovirus E1A-associated protein p60 and behaves differently from cyclin B. *Nature* 346: 760-763.
6. Bandara, L.R., et al. 1991. Cyclin A and the retinoblastoma gene product complex with a common transcription factor. *Nature* 352: 249-251.
7. Williams, R.T., et al. 1992. Co-purification of p34Cdc2/p58 cyclin A proline-directed protein kinase and the retinoblastoma tumor susceptibility gene product: interaction of an oncogenic Serine/Threonine protein kinase with a tumor-suppressor protein. *Oncogene* 7: 423-432.
8. Lees, E., et al. 1992. Cyclin E/Cdk2 and cyclin A/Cdk2 kinases associate with p107 and E2F in a temporally distinct manner. *Genes Dev.* 6: 1874-1885.

CHROMOSOMAL LOCATION

Genetic locus: CCNA2 (human) mapping to 4q27; Ccna2 (mouse) mapping to 3 B.

SOURCE

cyclin A (V-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of cyclin A of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31085 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cyclin A (V-18) is recommended for detection of cyclin A 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)], 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).

cyclin A (V-18) is also recommended for detection of cyclin A in additional species, including equine, canine and porcine.

Suitable for use as control antibody for cyclin A siRNA (h): sc-29282, cyclin A siRNA (m): sc-29283, cyclin A shRNA Plasmid (h): sc-29282-SH, cyclin A shRNA Plasmid (m): sc-29283-SH, cyclin A shRNA (h) Lentiviral Particles: sc-29282-V and cyclin A shRNA (m) Lentiviral Particles: sc-29283-V.

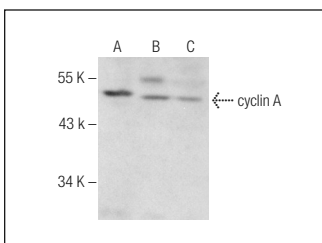
Molecular Weight of cyclin A: 54 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, K-562 whole cell lysate: sc-2203 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



cyclin A (V-18): sc-31085. Western blot analysis of cyclin A expression in K-562 (A), HuT 78 (B) and U-937 (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.