

CINP (N-16): sc-242440

BACKGROUND

Cell cycle progression is controlled in part by a family of cyclin proteins and cyclin dependent kinases (Cdks). Cdk proteins work in concert with the cyclins to phosphorylate key substrates involved in each phase of cell cycle progression. Specifically, Cdk2 interacts with Cyclins A, B1, B3, D, or E to control cell cycle progression. The Cyclin-dependent kinase 2-interacting protein (CINP) interacts with components of the replication complex and Cdk2 and Cdc7, thereby providing a functional and physical link between Cdk2 and Cdc7 during firing of the origins of replication. However, CINP is phosphorylated by Cdc7, but not by Cdk2. CINP also interacts with ATR-interacting protein and regulates ATR-dependent signaling, resistance to replication stress and G₂ checkpoint integrity.

REFERENCES

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- Grishina, I., et al. 2005. A novel Cdk2 interactor is phosphorylated by Cdc7 and associates with components of the replication complexes. *Cell Cycle* 4: 1120-1126.
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- Chuang, L.C., et al. 2009. Phosphorylation of Mcm2 by Cdc7 promotes pre-replication complex assembly during cell-cycle re-entry. *Mol. Cell* 35: 206-216.
- Lovejoy, C.A., et al. 2009. Functional genomic screens identify CINP as a genome maintenance protein. *Proc. Natl. Acad. Sci. USA* 106: 19304-19309.
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CHROMOSOMAL LOCATION

Genetic locus: CINP (human) mapping to 14q32.31; Cinp (mouse) mapping to 12 F1.

SOURCE

CINP (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CINP 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-242440 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CINP (N-16) is recommended for detection of CINP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CINP (N-16) is also recommended for detection of CINP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CINP siRNA (h): sc-92209, CINP siRNA (m): sc-142344, CINP shRNA Plasmid (h): sc-92209-SH, CINP shRNA Plasmid (m): sc-142344-SH, CINP shRNA (h) Lentiviral Particles: sc-92209-V and CINP shRNA (m) Lentiviral Particles: sc-142344-V.

Molecular Weight of CINP: 24 kDa.

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) 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.