

p55 CDC (N-19): sc-1907

BACKGROUND

Cyclins, regulatory subunits which associate with kinases, control many of the important steps in cell cycle progression. The Cdc2 protein kinase (p34Cdc2) exhibits protein kinase activity *in vitro* and exists in a complex with both cyclin B and a protein homologous to p13SUC1. Cdc2 kinase is the active subunit of the M phase promoting factor (MPF) and the M phase-specific Histone H1 kinase. The p34Cdc2/cyclin B complex is required for the G₂ to M transition. An additional cell cycle-dependent protein kinase termed p55 CDC exhibits a high degree of homology with the *S. cerevisiae* proteins Cdc20 and Cdc4. The p55 CDC transcript is readily detectable in a variety of cultured cell lines in growth phase, but disappears when cell growth is chemically arrested. p55 CDC shows kinase activity towards α -casein and Myelin basic protein.

REFERENCES

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- Arion, D., et al. 1988. Cdc2 is a component of the M phase-specific Histone H1 kinase: evidence for identity with MPF. *Cell* 55: 371-378.
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- Pines, J., et al. 1989. Isolation of a human cyclin cDNA: evidence for cyclin mRNA and protein regulation in the cell cycle and for interaction with p34Cdc2. *Cell* 58: 833-846.
- Jessus, C., et al. 1992. Oscillation of MPF is accompanied by periodic association between Cdc25 and Cdc2/cyclin B. *Cell* 68: 323-332.

CHROMOSOMAL LOCATION

Genetic locus: CDC20 (human) mapping to 1p34.2; Cdc20 (mouse) mapping to 4 D2.1.

SOURCE

p55 CDC (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of p55 CDC of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1907 P, (100 μ g 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.

RESEARCH USE

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

APPLICATIONS

p55 CDC (N-19) is recommended for detection of p55 CDC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

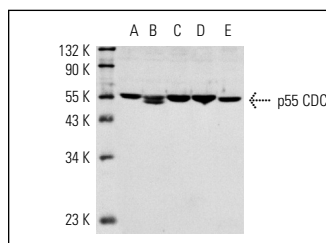
p55 CDC (N-19) is also recommended for detection of p55 CDC in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for p55 CDC siRNA (h): sc-36160, p55 CDC siRNA (m): sc-36159, p55 CDC shRNA Plasmid (h): sc-36160-SH, p55 CDC shRNA Plasmid (m): sc-36159-SH, p55 CDC shRNA (h) Lentiviral Particles: sc-36160-V and p55 CDC shRNA (m) Lentiviral Particles: sc-36159-V.

Molecular Weight of p55 CDC: 55 kDa.

Positive Controls: Ramos cell lysate: sc-2216, U-937 cell lysate: sc-2239 or K-562 whole cell lysate: sc-2203.

DATA



p55 CDC (N-19): sc-1907. Western blot analysis of p55 CDC expression in K-562 (A), MOLT-4 (B), Ramos (C), U-937 (D) and NIH/3T3 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

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- Wassmann, K., et al. 1998. MAD2 transiently associates with an APC/p55 CDC complex during mitosis. *Proc. Natl. Acad. Sci. USA* 95: 11193-11198.
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- Binne, U.K., et al. 2007. Retinoblastoma protein and anaphase-promoting complex physically interact and functionally cooperate during cell-cycle exit. *Nat. Cell Biol.* 9: 225-232.
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