SANTA CRUZ BIOTECHNOLOGY, INC.

p55 CDC (H-175): sc-8358

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 G_2 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

1. Brizuela, L., et al. 1987. p13SUC1 acts in the fission yeast cell division cycle as a component of the p34Cdc2 protein kinase. EMBO J. 6: 3507-3514.
2. 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.

CHROMOSOMAL LOCATION

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

SOURCE

p55 CDC (H-175) is a rabbit polyclonal antibody raised against amino acids 1-175 of p55 CDC 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.

APPLICATIONS

p55 CDC (H-175) 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 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).

p55 CDC (H-175) 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-42008, p55 CDC siRNA (m): sc-36159, p55 CDC shRNA Plasmid (h): sc-42008-SH, p55 CDC shRNA Plasmid (m): sc-36159-SH, p55 CDC shRNA (h) Lentiviral Particles: sc-42008-V and p55 CDC shRNA (m) Lentiviral Particles: sc-36159-V.

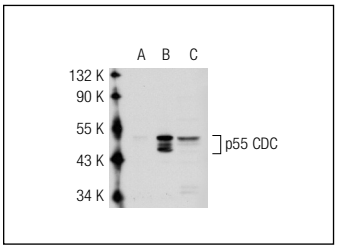
Molecular Weight of p55 CDC: 55 kDa.

Positive Controls: p55 CDC (m): 293T Lysate: sc-125767, p55 CDC (h): 293T Lysate: sc-111973 or Ramos cell lysate: sc-2216.

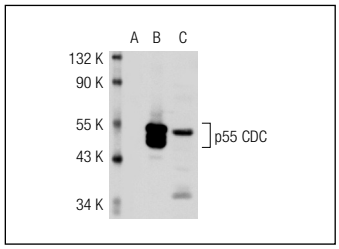
STORAGE

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

DATA



p55 CDC (H-175): sc-8358. Western blot analysis of p55 CDC expression in non-transfected 293T: sc-117752 (**A**), mouse p55 CDC transfected 293T: sc-125767 (**B**) and Ramos (**C**) whole cell lysates.



p55 CDC (H-175): sc-8358. Western blot analysis of p55 CDC expression in non-transfected 293T: sc-117752 (**A**), human p55 CDC transfected 293T: sc-111973 (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Sorensen, C.S., et al. 2000. Nonperiodic activity of the human anaphase-promoting complex-Cdh1 ubiquitin ligase results in continuous DNA synthesis uncoupled from mitosis. Mol. Cell. Biol. 20: 7613-7623.
2. Chow, J.P., et al. 2011. Inhibitory phosphorylation of cyclin-dependent kinase 1 as a compensatory mechanism for mitosis exit. Mol. Cell. Biol. 31: 1478-1491.
3. Ma, H.T., et al. 2011. Orderly inactivation of the key checkpoint protein mitotic arrest deficient 2 (MAD2) during mitotic progression. J. Biol. Chem. 286: 13052-13059.
4. Kogan-Sakin, I., et al. 2011. Mutant p53(R175H) upregulates Twist1 expression and promotes epithelial-mesenchymal transition in immortalized prostate cells. Cell Death Differ. 18: 271-281.
5. de Cárcer G., et al. 2011. Plk5, a polo box domain-only protein with specific roles in neuron differentiation and glioblastoma suppression. Mol. Cell. Biol. 31: 1225-1239.
6. Yin, N., et al. 2012. IQGAP1 interacts with Aurora-A and enhances its stability and its role in cancer. Biochem. Biophys. Res. Commun. 421: 64-69.
7. Tsang, YH., et al. 2012. Novel functions of the phosphatase SHP2 in the DNA replication and damage checkpoints. PLoS ONE 7: e49943.

RESEARCH USE

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