SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc20 (41): sc-136024

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 p13suc 1. 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 Cdc20 exhibits a high degree of homology with the *S. cerevisiae* proteins Cdc20 and Cdc4. The Cdc20 transcript is readily detectable in a variety of cultured cell lines in growth phase, but disappears when cell growth is chemically arrested. Cdc20 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. Dunphy, W.G., et al. 1988. The *Xenopus* Cdc2 protein is a component of MPF, a cytoplasmic regulator of mitosis. Cell 54: 423-431.
3. 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.
4. Morla, A.O., et al. 1989. Reversible tyrosine phosphorylation of Cdc2: dephosphorylation accompanies activation during entry into mitosis. Cell 58: 193-203.
5. 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.
6. Jessus, C., et al. 1992. Oscillation of MPF is accompanied by periodic association between Cdc25 and Cdc2-cyclin B. Cell 68: 323-332.
7. Weinstein, J., et al. 1994. A novel mammalian protein, p55CDC, present in dividing cells, is associated with protein kinase activity and has homology to the *Saccharomyces cerevisiae* cell division cycle proteins Cdc20 and Cdc4. Mol. Cell. Biol. 14: 3350-3363.
8. Ohtoshi, A., et al. 2000. Human p55CDC/Cdc20 associates with cyclin A and is phosphorylated by the cyclin A-Cdk2 complex. Biochem. Biophys. Res. Commun. 268: 530-534.
9. Conway, A.M., et al. 2007. Regulation of neuronal Cdc20 (p55cdc) expression by the plasticity-related transcription factor zif268. Synapse 61: 463-468.

CHROMOSOMAL LOCATION

Genetic locus: CDC20 (human) mapping to 1p34.2.

SOURCE

Cdc20 (41) is a mouse monoclonal antibody raised against amino acids 60-253 of Cdc20 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

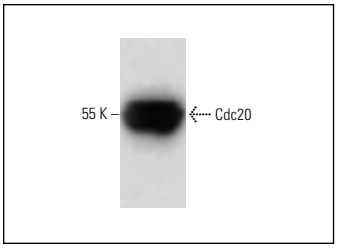
APPLICATIONS

Cdc20 (41) is recommended for detection of Cdc20 of 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Cdc20: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

DATA



Cdc20 (41): sc-136024. Western blot analysis of Cdc20 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kim, D.H., et al. 2018. TRIP13 and APC15 drive mitotic exit by turnover of interphase- and unattached kinetochore-produced MCC. Nat. Commun. 9: 4354.
2. Yu, J., et al. 2020. Regulation of sister chromatid cohesion by nuclear PD-L1. Cell Res. 30: 590-601.

STORAGE

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

PROTOCOLS

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

CONJUGATES

See **p55 CDC (E-7): sc-13162** for p55 CDC antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.