SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc20 (H-7): sc-5296

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.

CHROMOSOMAL LOCATION

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

SOURCE

Cdc20 (H-7) is a mouse monoclonal antibody raised against amino acids 1-175 of Cdc20 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cdc20 (H-7) is available conjugated to agarose (sc-5296 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-5296 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-5296 PE), fluorescein (sc-5296 FITC), Alexa Fluor® 488 (sc-5296 AF488), Alexa Fluor® 546 (sc-5296 AF546), Alexa Fluor® 594 (sc-5296 AF594) or Alexa Fluor® 647 (sc-5296 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-5296 AF680) or Alexa Fluor® 790 (sc-5296 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Cdc20 (H-7) is recommended for detection of Cdc20 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

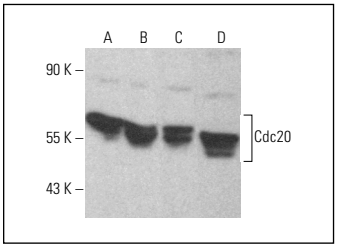
Suitable for use as control antibody for p55 CDC siRNA (h): sc-42008, Cdc20 siRNA (m): sc-36159, p55 CDC siRNA (r): sc-270488, p55 CDC shRNA Plasmid (h): sc-42008-SH, Cdc20 shRNA Plasmid (m): sc-36159-SH, p55 CDC shRNA Plasmid (r): sc-270488-SH, p55 CDC shRNA (h) Lentiviral Particles: sc-42008-V, Cdc20 shRNA (m) Lentiviral Particles: sc-36159-V and p55 CDC shRNA (r) Lentiviral Particles: sc-270488-V.

Molecular Weight of Cdc20: 55 kDa.

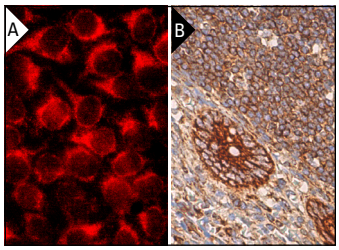
STORAGE

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

DATA



Cdc20 (H-7): sc-5296. Western blot analysis of Cdc20 expression in Ramos (**A**), MOLT-4 (**B**), Jurkat (**C**) and Raji (**D**) whole cell lysates.



Cdc20 (H-7): sc-5296. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic and membrane staining of glandular cells and lymphoid cells (**B**).

SELECT PRODUCT CITATIONS

1. Sato, H., et al. 2004. Pax-5 is essential for κ sterile transcription during Ig κ chain gene rearrangement. J. Immunol. 172: 4858-4865.
2. Di Fiore, B. and Pines, J. 2010. How cyclin A destruction escapes the spindle assembly checkpoint. J. Cell Biol. 190: 501-509.
3. Ma, H.T., et al. 2012. Depletion of $p31^{comet}$ promotes sensitivity to anti-mitotic drugs. J. Biol. Chem. 287: 21561-21569.
4. Schweizer, N., et al. 2013. Spindle assembly checkpoint robustness requires Tpr-mediated regulation of Mad1/Mad2 proteostasis. J. Cell Biol. 203: 883-893.
5. Rodriguez-Bravo, V., et al. 2014. Nuclear pores protect genome integrity by assembling a premitotic and Mad1-dependent anaphase inhibitor. Cell 156: 1017-1031.
6. Diaz-Martinez, L.A., et al. 2015. The Cdc20-binding Phe box of the spindle checkpoint protein BubR1 maintains the mitotic checkpoint complex during mitosis. J. Biol. Chem. 290: 2431-2443.
7. Naylor, R.M., et al. 2016. Nuclear pore protein NUP88 activates anaphase-promoting complex to promote aneuploidy. J. Clin. Invest. 126: 543-559.
8. Wu, F., et al. 2017. Prostate cancer-associated mutation in SPOP impairs its ability to target Cdc20 for poly-ubiquitination and degradation. Cancer Lett. 385: 207-214.
9. Macedo, J.C., et al. 2018. FoxM1 repression during human aging leads to mitotic decline and aneuploidy-driven full senescence. Nat. Commun. 9: 2834.
10. Richeson, K.V., et al. 2020. Paradoxical mitotic exit induced by a small molecule inhibitor of APC/C^{Cdc20}. Nat. Chem. Biol. 16: 546-555.

RESEARCH USE

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