

## Cdc20 (H-7): sc-5296



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<sub>2</sub> 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  $\alpha$ -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  $\mu$ g IgG<sub>2b</sub> 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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-5296 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-5296 PE), fluorescein (sc-5296 FITC), Alexa Fluor<sup>®</sup> 488 (sc-5296 AF488), Alexa Fluor<sup>®</sup> 546 (sc-5296 AF546), Alexa Fluor<sup>®</sup> 594 (sc-5296 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-5296 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-5296 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-5296 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## 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  $\mu$ g per 100-500  $\mu$ g 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).

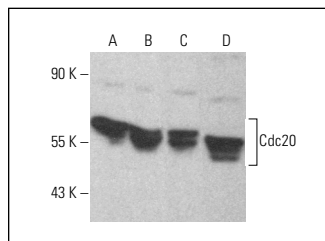
Suitable for use as control antibody for p55 CDC siRNA (h): sc-42008, Cdc20 siRNA (m): sc-36159, p55 CDC siRNA (r): sc-270488, p55 CDC shRNA Plasmid (h): sc-42008-SH, Cdc20 shRNA Plasmid (m): sc-36159-SH, p55 CDC shRNA Plasmid (r): sc-270488-SH, p55 CDC shRNA (h) Lentiviral Particles: sc-42008-V, Cdc20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

Molecular Weight of Cdc20: 55 kDa.

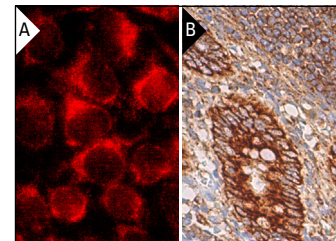
## STORAGE

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

- Sato, H., et al. 2004. Pax-5 is essential for  $\kappa$  sterile transcription during Ig  $\kappa$  chain gene rearrangement. *J. Immunol.* 172: 4858-4865.
- Di Fiore, B. and Pines, J. 2010. How cyclin A destruction escapes the spindle assembly checkpoint. *J. Cell Biol.* 190: 501-509.
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- 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.
- Macedo, J.C., et al. 2018. FoxM1 repression during human aging leads to mitotic decline and aneuploidy-driven full senescence. *Nat. Commun.* 9: 2834.
- Richeson, K.V., et al. 2020. Paradoxical mitotic exit induced by a small molecule inhibitor of APC/C<sup>Cdc20</sup>. *Nat. Chem. Biol.* 16: 546-555.

## RESEARCH USE

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