Cdc20 (AR12): sc-53398

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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. p13sun 1 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.

CHROMOSOMAL LOCATION

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

SOURCE

Cdc20 (AR12) is a mouse monoclonal antibody raised against recombinant Cdc20 of human origin.

PRODUCT

Each vial contains 200 µg IgG$_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cdc20 (AR12) 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

Positive Controls: Cdc20 (h): 293T Lysate: sc-111973, Ramos cell lysate: sc-2216 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA
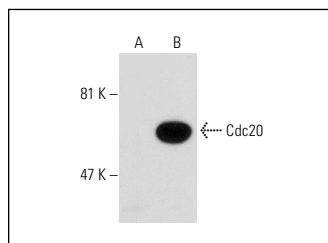
Cdc20 (AR12): sc-53398. Western blot analysis of Cdc20 expression in non-transfected: sc-117752 (**A**) and human Cdc20 transfected: sc-111973 (**B**) 293T whole cell lysates.
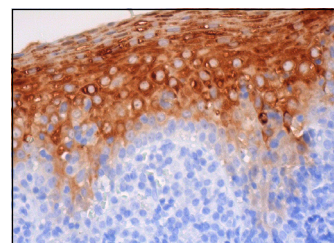
Cdc20 (AR12): sc-53398. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Ulasov, I.V., et al. 2009. Combination of adenoviral virotherapy and temozolomide chemotherapy eradicates malignant glioma through autophagic and apoptotic cell death *in vivo*. Br. J. Cancer 100: 1154-1164.

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.

PROTOCOLS

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