

Cdc20 (E-7): sc-13162



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 G₂ 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 (E-7) is a mouse monoclonal antibody raised against amino acids 1-175 of Cdc20 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cdc20 (E-7) is available conjugated to agarose (sc-13162 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13162 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13162 PE), fluorescein (sc-13162 FITC), Alexa Fluor[®] 488 (sc-13162 AF488), Alexa Fluor[®] 546 (sc-13162 AF546), Alexa Fluor[®] 594 (sc-13162 AF594) or Alexa Fluor[®] 647 (sc-13162 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-13162 AF680) or Alexa Fluor[®] 790 (sc-13162 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Cdc20 (E-7) is available conjugated to TRITC (sc-13162 TRITC, 200 μ g/ml), for IF, IHC(P) and FCM.

APPLICATIONS

Cdc20 (E-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 μ g per 100-500 μ g 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).

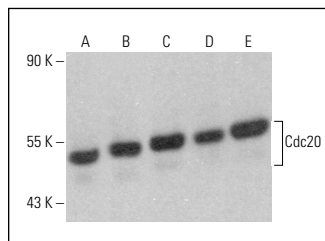
Suitable for use as control antibody for p55 CDC siRNA (h): sc-42008, Cdc20 siRNA (m): sc-36159, p55 CDC siRNA (r): sc-270488, p55 CDC shRNA Plasmid (h): sc-42008-SH, Cdc20 shRNA Plasmid (m): sc-36159-SH, p55 CDC shRNA Plasmid (r): sc-270488-SH, p55 CDC shRNA (h) Lentiviral Particles: sc-42008-V, Cdc20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

Molecular Weight of Cdc20: 55 kDa.

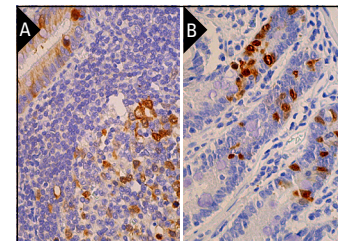
STORAGE

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

DATA



Cdc20 (E-7): sc-13162. Western blot analysis of Cdc20 expression in MOLT-4 (A), Jurkat (B), Raji (C), NTERA-2 cl.D1 (D) and HL-60 (E) whole cell lysates.



Cdc20 (E-7): sc-13162. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of subset of glandular cells and subset of lymphoid cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of subset of glandular cells (B).

SELECT PRODUCT CITATIONS

- Wiebusch, L., et al. 2005. Human cytomegalovirus inactivates the G₀/G₁-APC/C ubiquitin ligase by Cdh1 dissociation. *Cell Cycle* 4: 1435-1439.
- Yau, R.G., et al. 2017. Assembly and function of heterotypic ubiquitin chains in cell-cycle and protein quality control. *Cell* 171: 918-933.
- Wild, T., et al. 2018. Deletion of APC7 or APC16 allows proliferation of human cells without the spindle assembly checkpoint. *Cell Rep.* 25: 2317-2328.
- Cheng, S., et al. 2019. Cdc20 associated with cancer metastasis and novel mushroom-derived Cdc20 inhibitors with antimetastatic activity. *Int. J. Oncol.* 54: 2250-2256.
- Zhang, M., et al. 2020. Histone H2A phosphorylation recruits topoisomerase II α to centromeres to safeguard genomic stability. *EMBO J.* 39: e101863.
- Liu, L.P., et al. 2021. Transcriptomic and functional evidence show similarities between human amniotic epithelial stem cells and keratinocytes. *Cells* 11: 70.
- Wang, X., et al. 2022. Upregulation of cell division cycle 20 expression alters the morphology of neuronal dendritic spines in the nucleus accumbens by promoting FMRP ubiquitination. *J. Neurochem.* 162: 166-189.
- Ota, S., et al. 2023. Distinct effects of heat shock temperatures on mitotic progression by influencing the spindle assembly checkpoint. *Exp. Cell Res.* 429: 113672.
- Riley, A.K., et al. 2024. The deubiquitinase USP9X regulates RIT1 protein abundance and oncogenic phenotypes. *iScience* 27: 110499.

RESEARCH USE

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

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