

Cdc25B (C-20): sc-326

BACKGROUND

The Cdc2/cyclin B enzyme, involved in regulation of mitosis in eukaryotic cells, is subject to multiple levels of control. Among these, the regulation of the catalytic subunit by tyrosine phosphorylation is the best understood. tyrosine phosphorylation inhibits the Cdc2/cyclin B complex, while tyrosine dephosphorylation, which occurs at the onset of mitosis, directly activates the pre-MPH complex. The Cdc25 gene serves as a rate-limiting mitotic activator, apparently due to its action as the Cdc2 tyrosine phosphatase. In the absence of Cdc25, Cdc2 accumulates in a tyrosine phosphorylated state. In addition, Cdc25 proteins from a variety of species have been shown to share a low degree of sequence similarity with other tyrosine phosphatases. The Cdc25 gene family consists of at least three members that share approximately 40% identity in their most conserved carboxy-terminal sequences.

CHROMOSOMAL LOCATION

Genetic locus: CDC25B (human) mapping to 20p13; Cdc25b (mouse) mapping to 2 F1.

SOURCE

Cdc25B (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Cdc25B of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-326 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cdc25B (C-20) is recommended for detection of Cdc25B 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).

Cdc25B (C-20) is also recommended for detection of Cdc25B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Cdc25B siRNA (h): sc-37552, Cdc25B siRNA (m): sc-37553, Cdc25B shRNA Plasmid (h): sc-37552-SH, Cdc25B shRNA Plasmid (m): sc-37553-SH, Cdc25B shRNA (h) Lentiviral Particles: sc-37552-V and Cdc25B shRNA (m) Lentiviral Particles: sc-37553-V.

Molecular Weight of Cdc25B: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse liver extract: sc-2256 or HEL 92.1.7 cell lysate: sc-2270.

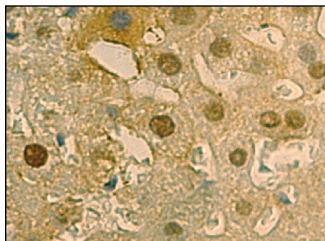
STORAGE

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.

DATA



Cdc25B (C-20): sc-326. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Baldin, V., et al. 1997. Alternative splicing of the human Ccd25B tyrosine phosphatase. Possible implications for growth control? *Oncogene* 14: 2485-2495.
2. Kudo, Y., et al. 1997. Overexpression of cyclin-dependent kinase-activating Cdc25B phosphatase in human gastric carcinomas. *Jpn. J. Cancer Res.* 88: 947-952.
3. Boutros, R., et al. 2011. CDC25B associates with a centrin 2-containing complex and is involved in maintaining centrosome integrity. *Biol. Cell* 103: 55-68.
4. Holt, J.E., et al. 2011. The APC/C activator FZR1 coordinates the timing of meiotic resumption during prophase I arrest in mammalian oocytes. *Development* 138: 905-913.
5. Uchida, S., et al. 2011. SCF^{βTrCP} mediates stress-activated MAPK-induced Cdc25B degradation. *J. Cell Sci.* 124: 2816-2825.
6. Jullien, D., et al. 2011. Identification of N-terminally truncated stable nuclear isoforms of CDC25B that are specifically involved in G₂/M check-point recovery. *Cancer Res.* 71: 1968-1977.
7. Saiko, P., et al. 2011. A novel N-hydroxy-N'-aminoguanidine derivative inhibits ribonucleotide reductase activity: Effects in human HL-60 promyelocytic leukemia cells and synergism with arabinofuranosylcytosine (Ara-C). *Biochem. Pharmacol.* 81: 50-59.
8. Dalvai, M., et al. 2011. Cdc25B is negatively regulated by p53 through Sp1 and NF-Y transcription factors. *Oncogene* 30: 2282-2288.

MONOS
Satisfaction
Guaranteed

Try **Cdc25B (DCS-162): sc-56266** or **Cdc25B (DCS-164): sc-65504**, our highly recommended monoclonal alternatives to Cdc25B (C-20).