

Cdc25A (144): sc-97

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: CDC25A (human) mapping to 3p21.31; Cdc25a (mouse) mapping to 9 F2.

SOURCE

Cdc25A (144) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of Cdc25A of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-97 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cdc25A (144) is recommended for detection of Cdc25A 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Cdc25A (144) is also recommended for detection of Cdc25A in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Cdc25A siRNA (h): sc-29254, Cdc25A siRNA (m): sc-35037, Cdc25A shRNA Plasmid (h): sc-29254-SH, Cdc25A shRNA Plasmid (m): sc-35037-SH, Cdc25A shRNA (h) Lentiviral Particles: sc-29254-V and Cdc25A shRNA (m) Lentiviral Particles: sc-35037-V.

Molecular Weight of Cdc25A: 67 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, SK-N-MC cell lysate: sc-2237 or BJAB whole cell lysate: sc-2207.

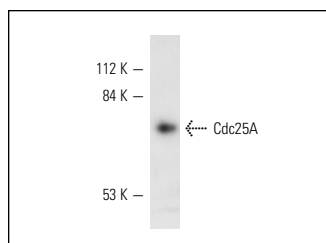
STORAGE

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



Cdc25A (144): sc-97. Western blot analysis of Cdc25A expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

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- Younis, R.H., et al. 2012. CDC25A(Q110del): a novel cell division cycle 25A isoform aberrantly expressed in non-small cell lung cancer. *PLoS ONE* 7: e46464.
- Brunetto, E., et al. 2013. CDC25A protein stability represents a previously unrecognized target of HER2 signaling in human breast cancer: implication for a potential clinical relevance in trastuzumab treatment. *Neoplasia* 15: 579-590.
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- Gu, Y., et al. 2014. Fusarochromanone induces G₁ cell cycle arrest and apoptosis in COS7 and HEK293 cells. *PLoS ONE* 9: e112641.
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