SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc37 (15): sc-135862

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell cycle events are regulated by the sequential activation and deactivation of cyclin dependent kinases (Cdks) and by the proteolysis of cyclins. The cell division cycle (Cdc) genes are required at various points in the cell cycle. Cdc25A, Cdc25B and Cdc25C protein tyrosine phosphatases function as mitotic activators by dephosphorylating Cdc2 p34 on regulatory tyrosine residues. Cdc6 is the human homolog of *Saccharomyces cerevisiae* Cdc6, which is involved in the initiation of DNA replication. Cdc37 appears to facilitate Cdk4/cyclin D1 complex formation and has been shown to form a stable complex with HSP 90. Cdc34, Cdc27 and Cdc16 function as ubiquitin-conjugating enzymes. Cdc34 is thought to be the structural and functional homolog of *Saccharomyces cerevisiae* Cdc34, which is essential for the G_1 to S phase transition. Cdc16 and Cdc27 are components of the APC (anaphase-promoting complex) which ubiquitinates cyclin B, resulting in cyclin B/Cdk complex degradation.

REFERENCES

1. Palmer, R.E., et al. 1990. Mitotic transmission of artificial chromosomes in Cdc mutants of the yeast, *Saccharomyces cerevisiae*. Genetics 125: 763-774.
2. Gautier, J., et al. 1991. Cdc25 is a specific tyrosine phosphatase that directly activates $p34^{Cdc2}$. Cell 67: 197-211.
3. Plon, S.E., et al. 1993. Cloning of the human homolog of the Cdc34 cell cycle gene by complementation in yeast. Proc. Natl. Acad. Sci. USA 90: 10484-10488.
4. King, R.W., et al. 1995. A 20S complex containing Cdc27 and Cdc16 catalyzes the mitosis-specific conjugation of ubiquitin to cyclin B. Cell 81: 279-288.
5. Barinaga, M. 1995. A new twist to the cell cycle. Science 269: 631-632.
6. Stepanova, L., et al. 1996. Mammalian $p50^{Cdc37}$ is a protein kinase-targeting subunit of Hsp90 that binds and stabilizes Cdk4. Genes Dev. 10: 1491-1502.
7. Williams, R.S., et al. 1997. A human protein related to yeast Cdc6p. Proc. Natl. Acad. Sci. USA 94: 142-147.
8. Kise, Y., et al. 2006. Fused kinase is stabilized by Cdc37/Hsp90 and enhances Gli protein levels. Biochem. Biophys. Res. Commun. 351: 78-84.
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CHROMOSOMAL LOCATION

Genetic locus: CDC37 (human) mapping to 19p13.2; Cdc37 (mouse) mapping to 9 A3.

SOURCE

Cdc37 (15) is a mouse monoclonal antibody raised against amino acids 1-163 of Cdc37 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

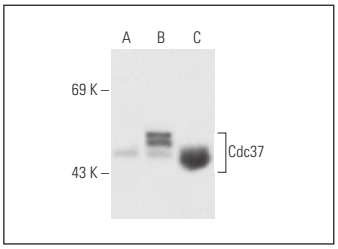
Cdc37 (15) is recommended for detection of Cdc37 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

Suitable for use as control antibody for Cdc37 siRNA (h): sc-29255, Cdc37 siRNA (m): sc-35043, Cdc37 shRNA Plasmid (h): sc-29255-SH, Cdc37 shRNA Plasmid (m): sc-35043-SH, Cdc37 shRNA (h) Lentiviral Particles: sc-29255-V and Cdc37 shRNA (m) Lentiviral Particles: sc-35043-V.

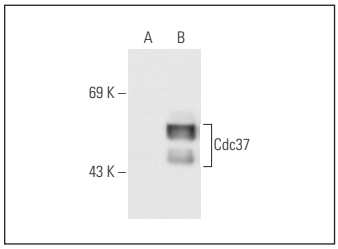
Molecular Weight of Cdc37: 50 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242, K-562 whole cell lysate: sc-2203 or Cdc37 (h4): 293T Lysate: sc-174915.

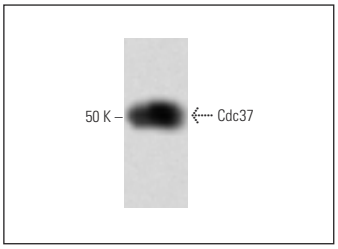
DATA



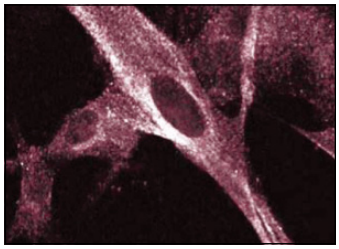
Cdc37 (15): sc-135862. Western blot analysis of Cdc37 expression in non-transfected 293T: sc-117752 (**A**), human Cdc37 transfected 293T: sc-174915 (**B**) and K-562 (**C**) whole cell lysates.



Cdc37 (15): sc-135862. Western blot analysis of Cdc37 expression in non-transfected: sc-117752 (**A**) and human Cdc37 transfected: sc-174911 (**B**) 293T whole cell lysates.



Cdc37 (15): sc-135862. Western blot analysis of Cdc37 expression in human endothelial whole cell lysate.



Cdc37 (15): sc-135862. Immunofluorescence staining of WI-38 cells showing cytoplasmic staining.

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. Not for resale.