

Cdc37 (H-271): sc-5617

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 G₁ 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

- Palmer, R.E., et al. 1990. Mitotic transmission of artificial chromosomes in cdc mutants of the yeast, *Saccharomyces cerevisiae*. Genetics 125: 763-774.
- Gautier, J., et al. 1991. Cdc25 is a specific tyrosine phosphatase that directly activates p34Cdc2. Cell 67: 197-211.
- 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.
- 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.
- Barinaga, M. 1995. A new twist to the cell cycle. Science 269: 631-632.

CHROMOSOMAL LOCATION

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

SOURCE

Cdc37 (H-271) is a rabbit polyclonal antibody raised against amino acids 108-378 mapping at the C-terminus of Cdc37 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.

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.

APPLICATIONS

Cdc37 (H-271) is recommended for detection of Cdc37 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).

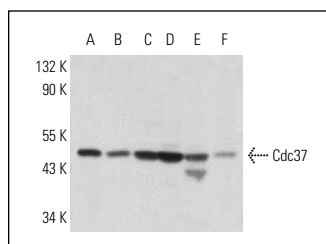
Cdc37 (H-271) is also recommended for detection of Cdc37 in additional species, including canine, bovine and porcine.

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.

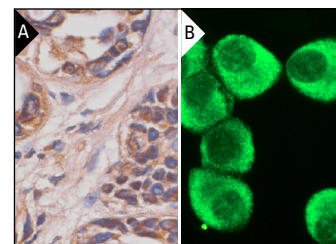
Molecular Weight of Cdc37: 50 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Jurkat whole cell lysate: sc-2204 or CTLL-2 cell lysate: sc-2242.

DATA



Cdc37 (H-271): sc-5617. Western blot analysis of Cdc37 expression in A-431 (A), Jurkat (B), CTLL-2 (C), K-562 (D) and LNCaP (E) whole cell lysates and rat testis (F) tissue extract.



Cdc37 (H-271): sc-5617. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic and nuclear staining (A). Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Zhang, H., et al. 2004. Hsp90/p50^{Cdc37} is required for mixed-lineage kinase (MLK) 3 signaling. J. Biol. Chem. 279: 19457-19463.
- Park, S., et al. 2007. Rapid activation of c-Src kinase by dioxin is mediated by the Cdc37-HSP90 complex as part of Ah receptor signaling in MCF10A cells. Biochemistry 46: 899-908.
- Tsaytler, P.A., et al. 2009. Novel Hsp90 partners discovered using complementary proteomic approaches. Cell Stress Chaperones 14: 629-638.

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Try **Cdc37 (E-4): sc-13129** or **Cdc37 (C-11): sc-17758**, our highly recommended monoclonal alternatives to Cdc37 (H-271).