

Cdc37 (C-11): sc-17758



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 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 p34^{cdc2}. *Cell* 67: 197-211.

CHROMOSOMAL LOCATION

Genetic locus: CDC37 (human) mapping to 19p13.2.

SOURCE

Cdc37 (C-11) is a mouse monoclonal antibody raised against amino acids 108-378 of Cdc37 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cdc37 (C-11) is recommended for detection of Cdc37 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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).

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

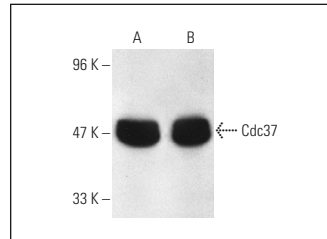
Molecular Weight of Cdc37: 50 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

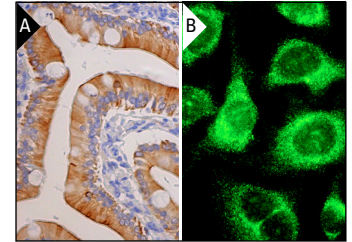
STORAGE

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

DATA



Cdc37 (C-11): sc-17758. Western blot analysis of Cdc37 expression in Jurkat (A) and K-562 (B) whole cell lysates.



Cdc37 (C-11): sc-17758. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and membrane staining of glandular cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Moriwaki, Y., et al. 2008. L347P PINK1 mutant that fails to bind to HSP 90/ Cdc37 chaperones is rapidly degraded in a proteasome-dependent manner. *Neurosci. Res.* 61: 43-48.
- Farhana, L., et al. 2011. Maximal adamantyl-substituted retinoid-related molecule-induced apoptosis requires NFκB noncanonical and canonical pathway activation. *Cell Death Differ.* 18: 164-173.
- Ruzzene, M., et al. 2011. Protein kinase CK2 accumulation in "oncophilic" cells: causes and effects. *Mol. Cell. Biochem.* 356: 5-10.
- Laederich, M.B., et al. 2011. Fibroblast growth factor receptor 3 (FGFR3) is a strong heat shock protein 90 (Hsp90) client: implications for therapeutic manipulation. *J. Biol. Chem.* 286: 19597-19604.
- Liu, Z., et al. 2013. Profiling of kidney vascular endothelial cell plasma membrane proteins by liquid chromatography-tandem mass spectrometry. *Clin. Exp. Nephrol.* 17: 327-337.
- Jin, J., et al. 2016. Mutational analysis of glycogen synthase kinase 3β protein kinase together with kinome-wide binding and stability studies suggests context-dependent recognition of kinases by the chaperone heat shock protein 90. *Mol. Cell. Biol.* 36: 1007-1018.
- Shen, C.H., et al. 2021. AU922 induces retinal toxicity through attenuating TRPM1. *J. Biomed. Sci.* 28: 55.
- Li, T., et al. 2022. HSP90-CDC37 functions as a chaperone for the oncogenic FGFR3-TACC3 fusion. *Mol. Ther.* 30: 1610-1627.
- Huang, W.R., et al. 2022. p17-modulated Hsp90/Cdc37 complex governs oncolytic avian reovirus replication by chaperoning p17, which promotes viral protein synthesis and accumulation of viral proteins σC and σA in viral factories. *J. Virol.* 96: e0007422.

RESEARCH USE

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