

Cdc6 (H-304): sc-8341

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 control (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.

CHROMOSOMAL LOCATION

Genetic locus: CDC6 (human) mapping to 17q21.2; Cdc6 (mouse) mapping to 11 D.

SOURCE

Cdc6 (H-304) is a rabbit polyclonal antibody raised against amino acids 257-560 of Cdc6 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.

APPLICATIONS

Cdc6 (H-304) is recommended for detection of Cdc6 p62 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).

Cdc6 (H-304) is also recommended for detection of Cdc6 p62 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Cdc6 siRNA (h): sc-29258, Cdc6 siRNA (m): sc-35046, Cdc6 shRNA Plasmid (h): sc-29258-SH, Cdc6 shRNA Plasmid (m): sc-35046-SH, Cdc6 shRNA (h) Lentiviral Particles: sc-29258-V and Cdc6 shRNA (m) Lentiviral Particles: sc-35046-V.

Molecular Weight of Cdc6: 62 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat whole cell lysate: sc-2204 or NIH/3T3 whole cell lysate: sc-2210.

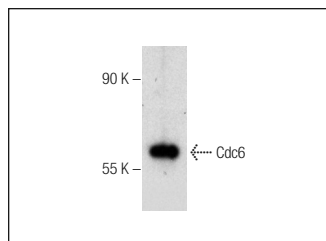
STORAGE

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

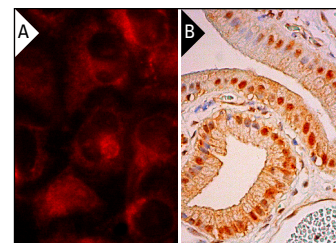
RESEARCH USE

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

DATA



Cdc6 (H-304): sc-8341. Western blot analysis of Cdc6 expression in 293T whole cell lysate.



Cdc6 (H-304): sc-8341. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Okuno, Y., et al. 2001. Stability, chromatin association and functional activity of mammalian pre-replication complex proteins during the cell cycle. *EMBO J.* 20: 4263-4277.
- Di Paola, D., et al. 2010. Increased origin activity in transformed versus normal cells: identification of novel protein players involved in DNA replication and cellular transformation. *Nucleic Acids Res.* 38: 2314-2331.
- Mendoza-Maldonado, R., et al. 2010. Interaction of the retinoblastoma protein with Orc1 and its recruitment to human origins of DNA replication. *PLoS ONE* 5: e13720.
- Zhang, K., et al. 2010. Activation of Cdc6 by MyoD is associated with the expansion of quiescent myogenic satellite cells. *J. Cell Biol.* 188: 39-48.
- Jia, L., et al. 2011. RBX1 (RING box protein 1) E3 ubiquitin ligase is required for genomic integrity by modulating DNA replication licensing proteins. *J. Biol. Chem.* 286: 3379-3386.
- Sideridou, M., et al. 2011. Cdc6 expression represses E-cadherin transcription and activates adjacent replication origins. *J. Cell Biol.* 195: 1123-1140.
- Di Paola, D. and Zannis-Hadjopoulos, M. 2012. Comparative analysis of pre-replication complex proteins in transformed and normal cells. *J. Cell. Biochem.* 113: 1333-1347.
- Isaacs, J.T., et al. 2012. Adaptive auto-regulation of androgen receptor provides a paradigm shifting rationale for bipolar androgen therapy (BAT) for castrate resistant human prostate cancer. *Prostate* 72: 1491-1505.



Try **Cdc6 (180.2): sc-9964** or **Cdc6 (D-1): sc-13136**, our highly recommended monoclonal alternatives to Cdc6 (H-304). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Cdc6 (180.2): sc-9964**.