

p19 (M-167): sc-1063

BACKGROUND

The normal progression of cells through the cell cycle is under the control of the cyclin dependent protein kinases Cdk4 and Cdk6, which are subject to inhibition by the mitotic inhibitory protein, p16. Isolated members of the p16 family have been designated p15, p18 and p19. p15 expression is upregulated approximately 30-fold in TGF β -treated human keratinocytes, suggesting that p15 may function as an effector of TGF β -mediated cell cycle arrest through inhibition of Cdk4 and Cdk6 kinases. The gene encoding p15 has been mapped to chromosome 9p21.3 at a position adjacent to the p16 gene, at a site of frequent chromosomal abnormality in human tumors. Two p16-related proteins, p19 and p18, specifically inhibit the kinase activities of Cdk4 and Cdk6 but do not affect those of cyclin E-Cdk2, cyclin A-Cdk2 or cyclin B-Cdk2 complexes. p19 is expressed at maximal level during S phase, while overexpression of p19 leads to G₁ arrest.

REFERENCES

- Serrano, M., et al. 1993. A new regulatory motif in cell cycle control causing specific inhibition of cyclin D/Cdk4. *Nature* 366: 704-707.
- Kamb, A., et al. 1994. A cell cycle regulator potentially involved in genesis of many tumor types. *Science* 264: 436-440.

CHROMOSOMAL LOCATION

Genetic locus: CDKN2D (human) mapping to 19p13.2; Cdkn2d (mouse) mapping to 9 A3.

SOURCE

p19 (M-167) is available as either rabbit (sc-1063) or goat (sc-1063-G) affinity purified polyclonal antibody raised against amino acids 1-167 representing full length p19 of mouse origin.

PRODUCT

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

APPLICATIONS

p19 (M-167) is recommended for detection of p19 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for p19 siRNA (h): sc-36148, p19 siRNA (m): sc-36147, p19 shRNA Plasmid (h): sc-36148-SH, p19 shRNA Plasmid (m): sc-36147-SH, p19 shRNA (h) Lentiviral Particles: sc-36148-V and p19 shRNA (m) Lentiviral Particles: sc-36147-V.

Molecular Weight of p19: 19 kDa.

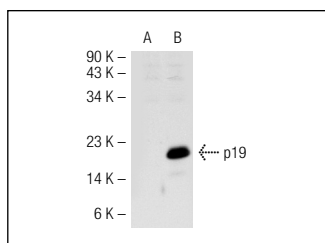
STORAGE

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

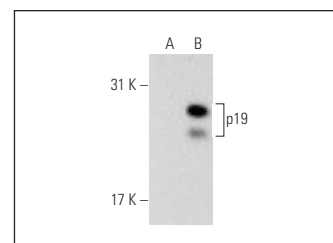
RESEARCH USE

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

DATA



p19 (M-167): sc-1063. Western blot analysis of p19 expression in non-transfected: sc-117752 (A) and mouse p19 transfected: sc-122302 (B) 293T whole cell lysates.



p19 (M-167): sc-1063. Western blot analysis of p19 expression in non-transfected: sc-117752 (A) and human p19 transfected: sc-174520 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Zindy, F., et al. 1997. Expression of the p16^{INK4a} tumor suppressor versus other INK4 family members during mouse development and aging. *Oncogene* 15: 203-211.
- Lynch, J., et al. 2003. Cdx1 inhibits the proliferation of human colon cancer cells by reducing cyclin D1 gene expression. *Oncogene* 22: 6395-6407.
- Rylski, M., et al. 2003. GATA-1-mediated proliferation arrest during erythroid maturation. *Mol. Cell. Biol.* 23: 5031-5042.
- Klausen, P., et al. 2004. End-stage differentiation of neutrophil granulocytes *in vivo* is accompanied by up-regulation of p27^{kip1} and down-regulation of CDK2, CDK4, and CDK6. *J. Leukoc. Biol.* 75: 569-578.
- Lallemand, D., et al. 2009. Merlin regulates transmembrane receptor accumulation and signaling at the plasma membrane in primary mouse Schwann cells and in human schwannomas. *Oncogene* 28: 854-865.
- Zhang, S., et al. 2009. RhoA regulates G₁-S progression of gastric cancer cells by modulation of multiple INK4 family tumor suppressors. *Mol. Cancer Res.* 7: 570-580.
- Peres, J., et al. 2010. The highly homologous T-Box transcription factors, TBX2 and TBX3, have distinct roles in the oncogenic process. *Genes Cancer* 1: 272-282.
- Marazita, M.C., et al. 2012. CDK2 and PKA mediated-sequential phosphorylation is critical for p19^{INK4d} function in the DNA damage response. *PLoS ONE* 7: e35638.



Try **p19 (DCS-100): sc-56334** or **p19 (E-11): sc-1665**, our highly recommended monoclonal alternatives to p19 (M-167).