

p18 (M-168): sc-1208



The Power to Question

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 and p18. p15 expression is upregulated approximately 30-fold in TGF β -treated human keratinocytes. The gene encoding p15 has been mapped to chromosome 9p21 at a position adjacent to the p16 gene, at a site of frequent chromosomal abnormality in human tumors. It has been suggested that p15 may function as an effector of TGF β -mediated cell cycle arrest through inhibition of Cdk4 and Cdk6 kinase. The second p16-related protein, p18, interacts strongly with Cdk6 and to a lesser extent with Cdk4, but lacks apparent interaction with other Cdks. Recombinant p18 has been shown to inhibit cyclin D-Cdk6 kinase activity. In contrast to p21/p27 that form ternary complexes with cyclin-Cdks, only binary complexes of p15, p16 and p18 have been identified in association with Cdk4 and/or Cdk6.

CHROMOSOMAL LOCATION

Genetic locus: CDKN2C (human) mapping to 1p32.3; Cdkn2c (mouse) mapping to 4 C7.

SOURCE

p18 (M-168) is a rabbit polyclonal antibody raised against amino acids 1-168 representing full length p18 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

p18 (M-168) is recommended for detection of p18 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), 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).

p18 (M-168) is also recommended for detection of p18 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for p18 siRNA (h): sc-36145, p18 siRNA (m): sc-36146, p18 shRNA Plasmid (h): sc-36145-SH, p18 shRNA Plasmid (m): sc-36146-SH, p18 shRNA (h) Lentiviral Particles: sc-36145-V and p18 shRNA (m) Lentiviral Particles: sc-36146-V.

Molecular Weight of p18: 18 kDa.

Positive Controls: p18 (m): 293T Lysate: sc-125762, NIH/3T3 nuclear extract: sc-2138 or COLO320 DM cell lysate: sc-2226.

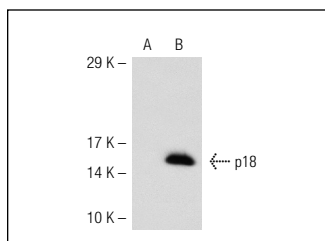
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

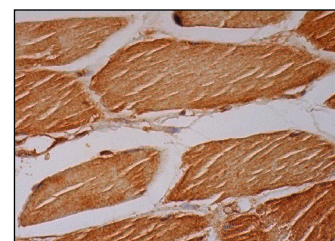
RESEARCH USE

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

DATA



p18 (M-168): sc-1208. Western blot analysis of p18 expression in non-transfected: sc-117752 (A) and mouse p18 transfected: sc-125762 (B) 293T whole cell lysates.



p18 (M-168): sc-1208. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing nuclear and cytoplasmic staining of myocytes.

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.
- Zhang, Y., et al. 2001. Connexin 43 suppresses proliferation of osteosarcoma U2OS cells through post-transcriptional regulation of p27. *Oncogene* 20: 4138-4149.
- Zindy, F., et al. 2001. Control of spermatogenesis in mice by the cyclin D-dependent kinase inhibitors p18^{Ink4c} and p19^{Ink4d}. *Mol. Cell. Biol.* 21: 3244-3255.
- LaRue, K.E., et al. 2004. Microenvironmental regulation of proliferation in multicellular spheroids is mediated through differential expression of cyclin-dependent kinase inhibitors. *Cancer Res.* 64: 1621-1631.
- Uziel, T., et al. 2005. The tumor suppressors INK4c and p53 collaborate independently with patched to suppress medulloblastoma formation. *Genes Dev.* 19: 2656-2667.
- Simpson, P.J., et al. 2007. Progressive and inhibitory cell cycle proteins act simultaneously to regulate neurotrophin-mediated proliferation and maturation of neuronal precursors. *Cell Cycle* 6: 1077-1089.
- van Veelen, W., et al. 2008. Synergistic effect of oncogenic RET and loss of p18 on medullary thyroid carcinoma development. *Cancer Res.* 68: 1329-1337.
- van Veelen, W., et al. 2009. P18 is a tumor suppressor gene involved in human medullary thyroid carcinoma and pheochromocytoma development. *Int. J. Cancer* 124: 339-345.

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