

p18 (M-20): sc-1064



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 Cdk. 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; Cdkn2c (mouse) mapping to 4 C7.

SOURCE

p18 (M-20) is available as either rabbit (sc-1064) or goat (sc-1064-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of 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.

Blocking peptide available for competition studies, sc-1064 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p18 (M-20) is recommended for detection of p18 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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, HeLa nuclear extract: sc-2120 or NIH/3T3 nuclear extract: sc-2138.

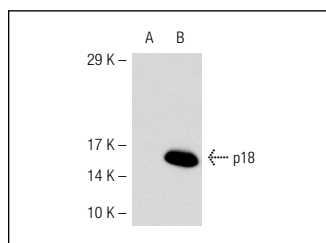
STORAGE

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

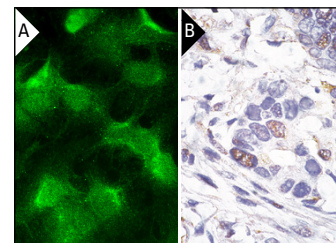
RESEARCH USE

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

DATA



p18 (M-20): sc-1064. Western blot analysis of p18 expression in non-transfected: sc-117752 (A) and mouse p18 transfected: sc-125762 (B) 293T whole cell lysates and HeLa nuclear extract (C).



p18 (M-20): sc-1064. Immunofluorescence staining of methanol-fixed Hep G2 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon carcinoma tissue showing nuclear staining of selected cells (B).

SELECT PRODUCT CITATIONS

1. Zindy, F., et al. 1997. Expression of the p16INK4A tumor suppressor versus other INK4 family members during mouse development and aging. *Oncogene* 15: 203-211.
2. Rylski, M., et al. 2003. GATA-1-mediated proliferation arrest during erythroid maturation. *Mol. Cell. Biol.* 23: 5031-5042.
3. Ogasawara, T., et al. 2004. Bone morphogenetic protein 2-induced osteoblast differentiation requires Smad-mediated down-regulation of Cdk6. *Mol. Cell. Biol.* 24: 6560-6568.
4. 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.
5. Bansal, R., et al. 2005. S-phase entry of oligodendrocyte lineage cells is associated with increased levels of p21Cip1. *J. Neurosci. Res.* 80: 360-368.
6. Hung, P.F., et al. 2005. Antimitogenic effect of green tea (-)-epigallocatechin gallate on 3T3-L1 preadipocytes depends on the ERK and Cdk2 pathways. *Am. J. Physiol., Cell Physiol.* 288: C1094-C1108.
7. Hussein, N., et al. 2006. Reconstituted expression of Menin in Men1-deficient mouse Leydig tumour cells induces cell cycle arrest and apoptosis. *Eur. J. Cancer* 43: 402-414.
8. Labalette, C., et al. 2008. The LIM-only protein fHL2 regulates cyclin D1 expression and cell proliferation. *J. Biol. Chem.* 283: 15201-15208.
9. Hu, M.G., et al. 2009. A requirement for cyclin-dependent kinase 6 in thymocyte development and tumorigenesis. *Cancer Res.* 69: 810-818.

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