

p19 (M-20): sc-1066



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, p18 and p19, respectively. 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-Cdc2 complexes. p19 is expressed at maximal level during S phase, while overexpression of p19 leads to G₁ arrest.

CHROMOSOMAL LOCATION

Genetic locus: Cdkn2d (mouse) mapping to 9 A3.

SOURCE

p19 (M-20) is available as either rabbit (sc-1066) or goat (sc-1066-G) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of 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.

Blocking peptide available for competition studies, sc-1066 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p19 (M-20) is recommended for detection of p19 of mouse and rat 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 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p19 (M-20) is also recommended for detection of p19 in additional species, including equine, bovine and porcine.

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

Molecular Weight of p19: 19 kDa.

Positive Controls: p19 (m): 293T Lysate: sc-122302 or NIH/3T3 whole cell lysate: sc-2210.

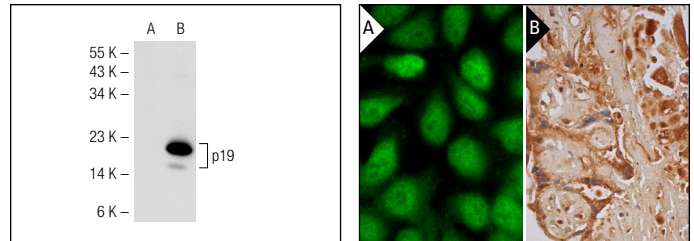
STORAGE

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



p19 (M-20): sc-1066. 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-20): sc-1066. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cytoplasmic localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and nuclear staining of trophoblastic cells and decidual cells (B).

SELECT PRODUCT CITATIONS

- Nargi, J.L., et al. 1999. p53-independent inhibition of proliferation and p21^{WAF1/Cip1}-modulated induction of cell death by the antioxidants N-acetylcysteine and vitamin E. *Neoplasia* 1: 544-556.
- Moro, T., et al. 2005. Inhibition of Cdk6 expression through p38 MAP kinase is involved in differentiation of mouse prechondrocyte ATDC5. *J. Cell. Physiol.* 204: 927-933.
- Schmetsdorf, S., et al. 2007. Constitutive expression of functionally active cyclin-dependent kinases and their binding partners suggests noncanonical functions of cell cycle regulators in differentiated neurons. *Cereb. Cortex* 17: 1821-1829.
- Mouton-Liger, F., et al. 2011. PCP4 (PEP19) overexpression induces premature neuronal differentiation associated with Ca²⁺/calmodulin-dependent kinase II- δ activation in mouse models of Down syndrome. *J. Comp. Neurol.* 519: 2779-2802.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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