

p18 INK4C (H-7): sc-514580

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 INK4A. Isolated members of the p16 INK4A family have been designated p15 INK4B and p18 INK4C. p15 INK4B expression is upregulated approximately 30-fold in TGF β -treated human keratinocytes. The gene encoding p15 INK4B has been mapped to chromosome 9p21.3 at a position adjacent to the p16 INK4A 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 INK4C, interacts strongly with Cdk6 and to a lesser extent with Cdk4, but lacks apparent interaction with other Cdk. Recombinant p18 INK4C has been shown to inhibit cyclin D-Cdk6 kinase activity. In contrast to p21 Waf1/Cip1/p27 that form ternary complexes with cyclin-Cdks, only binary complexes of p15 INK4B, p16 INK4A and p18 INK4C have been identified in association with Cdk4 and/or Cdk6.

REFERENCES

1. Serrano, M., et al. 1993. A new regulatory motif in cell cycle control causing specific inhibition of cyclin D/Cdk4. *Nature* 366: 704-707.
2. Sherr, C.J. 1994. G₁ phase progression: cycling on cue. *Cell* 79: 551-555.
3. Hunter, T., et al. 1994. Cyclins and cancer II: cyclin D and Cdk inhibitors come of age. *Cell* 79: 573-582.
4. Kamb, A., et al. 1994. A cell cycle regulator potentially involved in genesis of many tumor types. *Science* 264: 436-440.
5. Hannon, G.J., et al. 1994. p15 INK4B is a potential effector of TGF β -induced cell cycle arrest. *Nature* 371: 257-261.
6. Guan, K.L., et al. 1994. Growth suppression by p18, a p16^{INK4}/MTS1 and p14^{INK4B}/MTS2-related Cdk6 inhibitor, correlates with wild-type pRb function. *Genes Dev.* 8: 2939-2952.
7. Hussussian, C.J., et al. 1994. Germline p16 mutations in familial melanoma. *Nat. Genet.* 8: 15-21.

CHROMOSOMAL LOCATION

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

SOURCE

p18 INK4C (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-27 at the N-terminus of p18 INK4C of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514580 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

p18 INK4C (H-7) is recommended for detection of p18 INK4C of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 p18 INK4C siRNA (h): sc-36145, p18 INK4C siRNA (m): sc-36146, p18 INK4C shRNA Plasmid (h): sc-36145-SH, p18 INK4C shRNA Plasmid (m): sc-36146-SH, p18 INK4C shRNA (h) Lentiviral Particles: sc-36145-V and p18 INK4C shRNA (m) Lentiviral Particles: sc-36146-V.

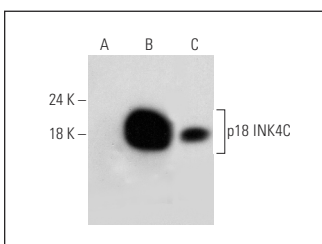
Molecular Weight of p18 INK4C: 18 kDa.

Positive Controls: p18 INK4C (m): 293T Lysate: sc-125762, NIH/3T3 whole cell lysate: sc-2210 or Saos-2 cell lysate: sc-2235.

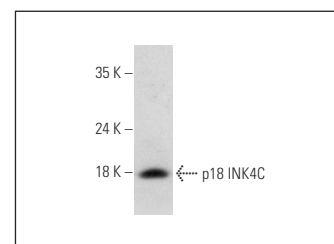
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



p18 INK4C (H-7): sc-514580. Western blot analysis of p18 INK4C expression in non-transfected 293T: sc-117752 (A), mouse p18 INK4C transfected 293T: sc-125762 (B) and Saos-2 (C) whole cell lysates.



p18 INK4C (H-7): sc-514580. Western blot analysis of p18 INK4C expression in NIH/3T3 whole cell lysate.

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.