

p18 INK4C (h): 293T Lysate: sc-174498

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.
8. Cairns, P., et al. 1994. Rates of p16 (MTS1) mutations in primary tumors with 9p loss. *Science* 265: 415-417.

CHROMOSOMAL LOCATION

Genetic locus: CDKN2C (human) mapping to 1p32.3.

PRODUCT

p18 INK4C (h): 293T Lysate represents a lysate of human p18 INK4C transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

p18 INK4C (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive p18 INK4C antibodies. Recommended use: 10-20 μ l per lane.

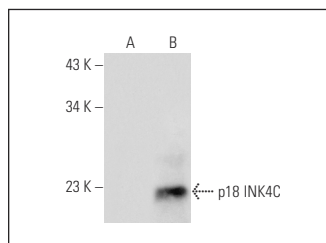
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

p18 INK4C (DCS-118): sc-56332 is recommended as a positive control antibody for Western Blot analysis of enhanced human p18 INK4C expression in p18 INK4C transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



p18 INK4C (DCS-118): sc-56332. Western blot analysis of p18 INK4C expression in non-transfected: sc-117752 (A) and human p18 INK4C transfected: sc-174498 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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