



p16 (1-168): sc-4995 WB

BACKGROUND

The progression of cells through the cell cycle is regulated by a family of protein kinases known as cyclin-dependent kinases (Cdks). The sequential activation of individual members of this family and their consequent phosphorylation of critical substrates promotes orderly progression through the cell cycle. The cyclins function as differentially expressed positive regulators of Cdks. Negative regulators of the cycle include the p53-inducible WAF1/Cip1 protein designated p21, Kip1 p27 and p16. The complexes formed by Cdk4 and the D-type cyclins have been strongly implicated in the control of cell proliferation during the G₁ phase. It has recently been shown that p16 binds to Cdk4 and inhibits the catalytic activity of the Cdk4/cyclin D complex. Moreover, the gene encoding p16 exhibits a high frequency of homozygous deletions and point mutations in established human tumor cell lines.

REFERENCES

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3. El-Deiry, W.S., et al. 1993. WAF1, a potential mediator of p53 tumor suppression. *Cell* 75: 817-825.
4. Hunter, T. 1993. Braking the cycle. *Cell* 75: 839-841.
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6. Serrano, M., et al. 1993. A new regulatory motif in cell-cycle control causing specific inhibition of cyclin D/Cdk4. *Nature* 366: 704-707.
7. Polyak, K., et al. 1994. p27Kip1, a cyclin-Cdk inhibitor, links transforming growth factor- β and contact inhibition to cell cycle arrest. *Genes Dev.* 8: 9-22.
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CHROMOSOMAL LOCATION

Genetic locus: Cdkn2a (mouse) mapping to 4 C4.

SOURCE

p16 (1-168) is expressed in *E. coli* as a 43 kDa tagged fusion protein corresponding to amino acids 1-168, representing full-length p16 of mouse origin.

PRODUCT

p16 (1-168) is purified from bacterial lysates (> 98%) by glutathione agarose affinity chromatography; supplied as 10 μ g in 0.1 ml SDS-PAGE loading buffer.

PROTOCOLS

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

APPLICATIONS

p16 (1-168) is suitable as a Western blotting control for sc-1661, sc-55600, sc-74400 and sc-74401.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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