

# p16 (H-156): sc-759

## 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 protein p21 (also designated WAF1 or Cip1), 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 G<sub>1</sub> phase. It has 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

- Sherr, C.J. 1993. Mammalian G<sub>1</sub> cyclins. *Cell* 73: 1059-1065.
- Harper, J.W., et al. 1993. The p21 cdk-interacting protein Cip1 is a potent inhibitor of G<sub>1</sub> cyclin-dependent kinases. *Cell* 75: 805-816.
- El-Deiry, W.S., et al. 1993. WAF1, a potential mediator of p53 tumor suppression. *Cell* 75: 817-825.
- Hunter, T. 1993. Braking the cycle. *Cell* 75: 839-841.

## CHROMOSOMAL LOCATION

Genetic locus: CDKN2A (human) mapping to 9p21, CDKN2C (human) mapping to 1p32.3.

## SOURCE

p16 (H-156) is a rabbit polyclonal antibody raised against amino acids 1-156 representing full length p16 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

p16 (H-156) is recommended for detection of p16 and, to a lesser extent, p15 and p18 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Molecular Weight of p16: 16 kDa.

Positive Controls: ME-180 whole cell lysate, Saos-2 cell lysate: sc-2235 or HeLa whole cell lysate: sc-2200.

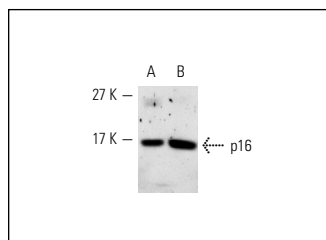
## STORAGE

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



p16 (H-156): sc-759. Western blot analysis p16 expression in Saos-2 (A) and HeLa (B) cell lysates.



p16 (H-156): sc-759. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Wlodarski, P., et al. 1998. Role of p53 in hematopoietic recovery after cytotoxic treatment. *Blood* 91: 2998-3006.
- Steiner, M.S., et al. 2000. p16/MTS1/INK4A suppresses prostate cancer by both pRb dependent and independent pathways. *Oncogene* 19: 1297-1306.
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