

# p16 (p16-D25): sc-81613

## 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 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

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- Hunter, T. 1993. Braking the cycle. *Cell* 75: 839-841.
- Xiong, Y., et al. 1993. p21 is a universal inhibitor of cyclin kinases. *Nature* 366: 701-704.
- Serrano, M., et al. 1993. A new regulatory motif in cell-cycle control causing specific inhibition of cyclin D/Cdk4. *Nature* 366: 704-707.
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- Kamb, A., et al. 1994. A cell cycle regulator potentially involved in genesis of many tumor types. *Science* 264: 436-440.

## CHROMOSOMAL LOCATION

Genetic locus: CDKN2A (human) mapping to 9p21.3.

## SOURCE

p16 (p16-D25) is a mouse monoclonal antibody raised against recombinant p16 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

p16 (p16-D25) is recommended for detection of recombinant or native p16 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for p16 siRNA (h): sc-36143, p16 shRNA Plasmid (h): sc-36143-SH and p16 shRNA (h) Lentiviral Particles: sc-36143-V.

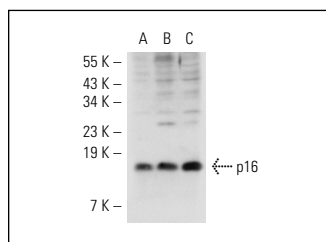
Molecular Weight of p16: 16 kDa.

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



p16 (p16-D25): sc-81613. Western blot analysis of p16 expression in Saos-2 (A), ME-180 (B) and HeLa (C) whole cell lysates.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.