# SANTA CRUZ BIOTECHNOLOGY, INC.

# p15 (K-18): sc-613



#### 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. An isolated member of the p16 family has been designated p15. p15 expression is upregulated approximately 30-fold in TGF $\beta$ -treated human keratinocytes, suggesting that p15 may act as an effector of TGF $\beta$ -mediated cell cycle arrest. The gene encoding p15 has been mapped to chromosome 9p21.3 at a position adjacent to the p16 gene at a site of frequent chromosomal abnormality in human tumors. It has been suggested that p15 may function as an effector of TGF $\beta$ -mediated cell cycle arrest through inhibition of Cdk4 and Cdk6 kinases.

### CHROMOSOMAL LOCATION

Genetic locus: CDKN2B (human) mapping to 9p21.3; Cdkn2b (mouse) mapping to 4 C4.

#### SOURCE

p15 (K-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of p15 of human origin.

#### PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-613 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

p15 (K-18) is recommended for detection of p15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

p15 (K-18) is also recommended for detection of p15 in additional species, including equine and canine.

Suitable for use as control antibody for p15 siRNA (h): sc-37624, p15 siRNA (m): sc-37625, p15 shRNA Plasmid (h): sc-37624-SH, p15 shRNA Plasmid (m): sc-37625-SH, p15 shRNA (h) Lentiviral Particles: sc-37624-V and p15 shRNA (m) Lentiviral Particles: sc-37625-V.

Molecular Weight of p15: 15 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or mouse thymus extract: sc-2406.

## STORAGE

Store at 4° C, \*\*D0 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.

#### **SELECT PRODUCT CITATIONS**

- 1. Cannell, E.J., et al. 1996. Epstein-Barr virus exploits the normal cell pathway to regulate Rb activity during the immortalisation of primary B-cells. Oncogene 13: 1413-1421.
- Masuda, A., et al. 2001. Protective function of p27<sup>KIP1</sup> against apoptosis in small cell lung cancer cells in unfavorable microenvironments. Am. J. Pathol. 158: 87-96.
- Schwarze, S., et al. 2001. Role of cyclin-dependent kinase inhibitors in the growth arrest at senescence in human prostate epithelial and uroepithelial cells. Oncogene 20: 8184-8192.
- Hsu, S.L., et al. 2001. Baicalein induces a dual growth arrest by modulating multiple cell cycle regulatory molecules. Eur. J. Pharmacol. 425: 165-171.
- Daskalakis, M., et al. 2002. Demethylation of a hypermethylated P15/ INK4B gene in patients with myelodysplastic syndrome by 5-Aza-2'deoxycytidine (decitabine) treatment. Blood 100: 2957-2964.
- 6. Kang, Y., et al. 2002. Altered expression of G<sub>1</sub>/S regulatory genes occurs early and frequently in lung carcinogenesis in transforming growth factor- $\beta$ 1 heterozygous mice. Carcinogenesis 23: 1217-1227.
- 7. Matsuda, Y., et al. 2003. Loss of p16 contributes to p27 sequestration by cyclin  $D_1$ -cyclin-dependent kinase 4 complexes and poor prognosis in hepatocellular carcinoma. Clin. Cancer Res. 9: 3389-3396.
- 8. Rylski, M., et al. 2003. GATA-1-mediated proliferation arrest during erythroid maturation. Mol. Cell. Biol. 23: 5031-5042.
- Lynch, J., et al. 2003. Cdx1 inhibits the proliferation of human colon cancer cells by reducing cyclin D1 gene expression. Oncogene 22: 6395-6407.
- Takeuchi, S., et al. 2010. Intrinsic cooperation between p16INK4α and p21<sup>Waf1/Cip1</sup> in the onset of cellular senescence and tumor suppression *in vivo*. Cancer Res. 70: 9381-9390.
- Por, E., et al. 2010. The cancer/testis antigen CAGE with oncogenic potential stimulates cell proliferation by up-regulating cyclins D1 and E in an AP-1- and E2F-dependent manner. J. Biol. Chem. 285: 14475-14485.
- 12. Wilhelm, E., et al. 2010. TAF6δ orchestrates an apoptotic transcriptome profile and interacts functionally with p53. BMC Mol. Biol. 11: 10.
- Monahan, K.B., et al. 2010. Somatic p16(INK4a) loss accelerates melanomagenesis. Oncogene 29: 5809-5817.
- 14. Yu, J.H., et al. 2010. The transcription factors signal transducer and activator of transcription 5A (STAT5A) and STAT5B negatively regulate cell proliferation through the activation of cyclin-dependent kinase inhibitor 2b (Cdkn2b) and Cdkn1a expression. Hepatology 52: 1808-1818.

# MONOS Satisfation Guaranteed

Try **p15/p16 (C-7): sc-377412** or **p15 (D-12): sc-271791**, our highly recommended monoclonal aternatives to p15 (K-18). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **p15/p16 (C-7): sc-377412**.