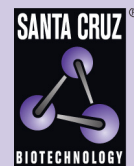


## p21 (N-20): sc-469



The Power to Question

## BACKGROUND

It is now well established that cyclins play a positive role in promoting cell cycle transitions via their ability to associate with and activate their cognate cyclin-dependent kinases (Cdks). Cdk2 associates with cyclins A, D and E and has been implicated in the control of the G<sub>1</sub> to S phase transition in mammals. A novel Cdk-interacting protein, designated p21, CIP1 or WAF1, has been identified in cyclin A, cyclin D1, cyclin E and Cdk2 immunoprecipitates. p21 is a potent, tight-binding inhibitor of Cdks and can inhibit the phosphorylation of Rb by cyclin A-Cdk2, cyclin E-Cdk2, cyclin D1-Cdk4 and cyclin D2-Cdk4 complexes. Expression of CIP1, also designated WAF1, is inducible by wild-type, but not mutant, p53. The mouse homolog of p21 is designated CAP20.

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: CDKN1A (human) mapping to 6p21.2.

## SOURCE

p21 (N-20) is available as either rabbit (sc-469) or goat (sc-469-G) affinity purified polyclonal antibody raised against a peptide mapping at the N-terminus of p21 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.

Blocking peptide available for competition studies, sc-469 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p21 (N-20) is recommended for detection of p21 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).

Suitable for use as control antibody for p21 siRNA (h): sc-29427, p21 shRNA Plasmid (h): sc-29427-SH and p21 shRNA (h) Lentiviral Particles: sc-29427-V.

Molecular Weight of p21: 21 kDa.

Positive Controls: C32 nuclear extract: sc-2136, C32 whole cell lysate: sc-2205 or HeLa nuclear extract: sc-2120.

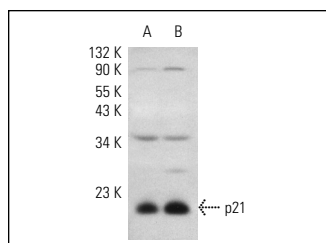
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

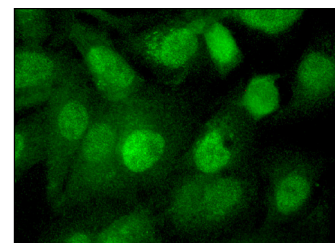
## RESEARCH USE

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

## DATA



p21 (N-20)-G: sc-469-G. Western blot analysis of p21 expression in C32 (A) and phorbol-treated C32 (B) nuclear extracts.



p21 (N-20): sc-469. Immunofluorescence staining of methanol-fixed Hep G2 cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

- Dimri, G.P., et al. 1996. Inhibition of E2F activity by the cyclin-dependent protein kinase inhibitor p21 in cells expressing or lacking a functional retinoblastoma protein. *Mol. Cell. Biol.* 16: 2987-2997.
- Nakamura, S., et al. 2011. Down-regulation of thanatos-associated protein 11 by Bcr-Abl promotes CML cell proliferation through c-Myc expression. *Int. J. Cancer* 130: 1046-1059.
- Wang, Z.J., et al. 2011. Induction of differentiation by panaxydol in human hepatocarcinoma SMMC-7721 cells via cAMP and MAP kinase dependent mechanism. *Yakugaku Zasshi* 131: 993-1000.
- Yan, J., et al. 2011. Andrographolide induces cell cycle arrest and apoptosis in human rheumatoid arthritis fibroblast-like synoviocytes. *Cell Biol. Toxicol.* 1: 47-56.
- Nakamura, S., et al. 2011. Bcr-Abl-mediated Raf kinase inhibitor protein suppression promotes chronic myeloid leukemia progenitor cells proliferation. *Stem Cell Dis.* 3: 54-66.
- Sobhan, P.K., et al. 2012. Immortalized functional endothelial progenitor cell lines from umbilical cord blood for vascular tissue engineering. *Tissue Eng. Part C Methods* 18: 890-902.
- Nakamura, S., et al. 2012. Down-regulation of Thanatos-associated protein 11 by Bcr-Abl promotes CML cell proliferation through c-Myc expression. *Int. J. Cancer* 130: 1046-1059.
- Enayat, S., et al. 2013. Anticarcinogenic effects of the ethanolic extract of *Salix aegyptiaca* in colon cancer cells: involvement of Akt/PKB and MAPK pathways. *Nutr. Cancer* 65: 1045-1058.



Try **p21 (F-5): sc-6246** or **p21 (F-8): sc-271610**, our highly recommended monoclonal alternatives to p21 (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p21 (F-5): sc-6246**.