

p21 (C-19): sc-397



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 G₁ to S phase transition in mammals. A novel Cdk-interacting protein, p21 (also designated WAF1/CIP1), 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-Cdk 2, cyclin E-Cdk2, cyclin D1-Cdk4 and cyclin D2-Cdk4 complexes. Expression of p21 is inducible by wildtype, but not mutant, p53. The mouse homolog of p21 is designated CAP20.

CHROMOSOMAL LOCATION

Genetic locus: CDKN1A (human) mapping to 6p21.2; Cdkn1a (mouse) mapping to 17 A3.3.

SOURCE

p21 (C-19) is available as either rabbit (sc-397) or goat (sc-397-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of p21 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-397 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-397 AC, 500 µg/0.25 ml agarose in 1 ml; as HRP conjugate for Western blotting, sc-397 HRP, 200 µg/ml; as fluorescein (sc-397 FITC) or rhodamine (sc-397 TRITC) conjugates for immunofluorescence, 200 µg/ml; and as Alexa Fluor® 405 (sc-397 AF405), Alexa Fluor® 488 (sc-397 AF488) or Alexa Fluor® 647 (sc-397 AF647) conjugates for cytometry flow or immunofluorescence; 100 µg/2 ml.

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APPLICATIONS

p21 (C-19) is recommended for detection of p21 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). p21 (C-19) is also recommended for detection of p21 in additional species, including equine, canine, bovine, porcine and feline.

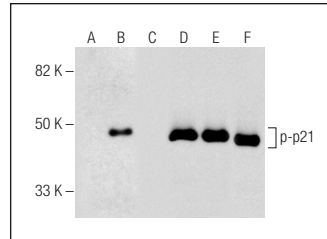
Suitable for use as control antibody for p21 siRNA (h): sc-29427, p21 siRNA (m): sc-29428, p21 shRNA Plasmid (h): sc-29427-SH, p21 shRNA Plasmid (m): sc-29428-SH, p21 shRNA (h) Lentiviral Particles: sc-29427-V and p21 shRNA (m) Lentiviral Particles: sc-29428-V.

Molecular Weight of p21: 21 kDa.

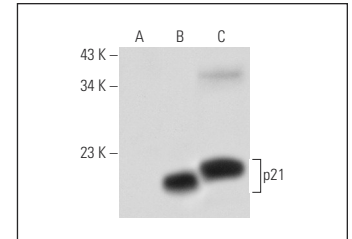
STORAGE

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

DATA



Western blot analysis of p21 phosphorylation in untreated (A, D), human recombinant PKC α treated (B, E) and human recombinant PKC α and lambda protein phosphatase (sc-200312) treated (C, F) human recombinant p21 fusion proteins. Antibodies tested include p-p21 (D-4): sc-377515 (A, B, C) and p21 (C-19): sc-397 (D, E, F).



p21 (C-19): sc-397. Western blot analysis of p21 expression in non-transfected 293T: sc-117752 (A), mouse p21 transfected 293T: sc-122305 (B) and C32 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Kawasaki, H., et al. 1998. Distinct roles of the co-activators p300 and CBP in retinoic-acid-induced F9 cell differentiation. *Nature* 393: 284-289.
- Dufour, J., et al. 2013. Lack of liver x receptors leads to cell proliferation in a model of mouse dorsal prostate epithelial cell. *PLoS ONE* 8: e58876.
- Méndez-Vidal, C., et al. 2013. PTTG2 silencing results in induction of epithelial-to-mesenchymal transition and apoptosis. *Cell Death Dis.* 4: e530.
- Ward, T.M., et al. 2013. Truncated p110 ERBB2 induces mammary epithelial cell migration, invasion and orthotopic xenograft formation, and is associated with loss of phosphorylated STAT5. *Oncogene* 32: 2463-2474.
- Marqués-Torrejón, M.Á., et al. 2013. Cyclin-dependent kinase inhibitor p21 controls adult neural stem cell expansion by regulating Sox2 gene expression. *Cell Stem Cell* 12: 88-100.
- Wrzosek, L., et al. 2013. *Bacteroides thetaiotaomicron* and *Faecalibacterium prausnitzii* influence the production of mucus glycans and the development of goblet cells in the colonic epithelium of a gnotobiotic model rodent. *BMC Biol.* 11: 61.

RESEARCH USE

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



Try **p21 (F-5): sc-6246** or **p21 (F-8): sc-271610**, our highly recommended monoclonal alternatives to p21 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p21 (F-5): sc-6246**.