

p27 (C-19): sc-528



The Power to Question

BACKGROUND

Cell cycle progression is regulated by a series of cyclin-dependent kinases consisting of catalytic subunits, designated Cdk, as well as activating subunits, designated cyclins. Orderly progression through the cell cycle requires the activation and inactivation of different cyclin-Cdks at appropriate times. A series of proteins has recently been described that function as "mitotic inhibitors." These include p21, the levels of which are elevated upon DNA damage in G₁ in a p53-dependent manner; p16; and a more recently described p16-related inhibitor designated p15. A p21-related protein, p27, has been described as a negative regulator of G₁ progression and speculated to function as a possible mediator of TGFβ-induced G₁ arrest. p27 interacts strongly with D-type cyclins and Cdk4 *in vitro* and, to a lesser extent, with cyclin E and Cdk2.

CHROMOSOMAL LOCATION

Genetic locus: CDKN1B (human) mapping to 12p13.1; Cdkn1b (mouse) mapping to 6 G1.

SOURCE

p27 (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of p27 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-528 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as HRP conjugate for Western blotting, sc-528 HRP, 200 µg/1 ml.

APPLICATIONS

p27 (C-19) is recommended for detection of p27 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p27 (C-19) is also recommended for detection of p27 in additional species, including canine, bovine, porcine and feline.

Suitable for use as control antibody for p27 siRNA (h): sc-29429, p27 siRNA (m): sc-29430, p27 shRNA Plasmid (h): sc-29429-SH, p27 shRNA Plasmid (m): sc-29430-SH, p27 shRNA (h) Lentiviral Particles: sc-29429-V and p27 shRNA (m) Lentiviral Particles: sc-29430-V.

Molecular Weight of p27: 27 kDa.

Positive Controls: MM-142 cell lysate: sc-2246, KNRK whole cell lysate: sc-2214 or p27 (m): 293T Lysate: sc-122312.

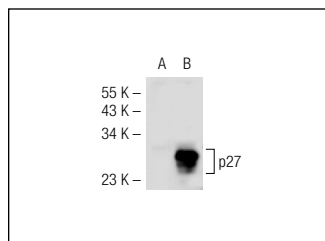
RESEARCH USE

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

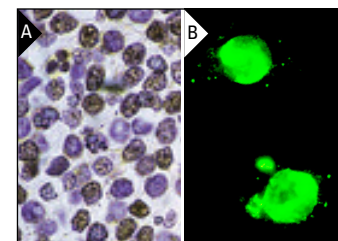
STORAGE

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

DATA



p27 (C-19): sc-528. Western blot analysis of p27 expression in non-transfected: sc-117752 (A) and mouse p27 transfected: sc-122312 (B) 293T whole cell lysates.



p27 (C-19): sc-528. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human spleen showing nuclear localization (A). Immunofluorescence staining of methanol-fixed Jurkat cells showing nuclear localization (B).

SELECT PRODUCT CITATIONS

- Pellegata, N., et al. 1996. DNA damage and p53 mediated cell cycle arrest: a reevaluation. *Proc. Natl. Acad. Sci. USA* 93: 15209-15214.
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- Diersch, S., et al. 2013. Efemp1 and p27^{Kip1} modulate responsiveness of pancreatic cancer cells towards a dual PI3K/mTOR inhibitor in preclinical models. *Oncotarget* 4: 277-288.
- Wu, X.L. and Zheng, P.S. 2013. Undifferentiated embryonic cell transcription factor-1 (UTF1) inhibits the growth of cervical cancer cells by transactivating p27^{Kip1}. *Carcinogenesis* 34: 1660-1668.
- Kim, S.H., et al. 2013. Prognostic significance and function of phosphorylated ribosomal protein S6 in esophageal squamous cell carcinoma. *Mod. Pathol.* 26: 327-335.
- Reiner, T., et al. 2013. Betulinic acid selectively increases protein degradation and enhances prostate cancer-specific apoptosis: possible role for inhibition of deubiquitinase activity. *PLoS ONE* 8: e56234.
- Turpin, W., et al. 2013. Behavior of lactobacilli isolated from fermented slurry (ben-saalga) in gnotobiotic rats. *PLoS ONE* 8: e57711.
- 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.



Try **p27 (F-8): sc-1641** or **p27 (SX53G8.5): sc-53871**, our highly recommended monoclonal alternatives to p27 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p27 (F-8): sc-1641**.