

p27 (M-197): sc-776



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.

REFERENCES

- Sherr, C.J. 1993. Mammalian G₁ cyclins. *Cell* 73: 1059-1065.
- El-Deiry, W.S., et al. 1993. WAF1, a potential mediator of p53 tumor suppression. *Cell* 75: 817-825.

CHROMOSOMAL LOCATION

Genetic locus: CDKN1B (human) mapping to 12p13.1, CDKN1A (human) mapping to 6p21.2; Cdkn1b (mouse) mapping to 6 G1, Cdkn1a (mouse) mapping to 17 A3.3.

SOURCE

p27 (M-197) is a rabbit polyclonal antibody raised against amino acids 1-197 representing full length p27 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p27 (M-197) is recommended for detection of p27 of mouse, rat, human and mink 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); partially cross-reactive with the related mitotic inhibitory protein, p21.

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.

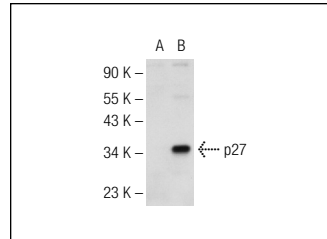
Molecular Weight of p27: 27 kDa.

Positive Controls: MM-142 cell lysate: sc-2246, KNRK whole cell lysate: sc-2214 or p27 (h): 293 Lysate: sc-129376.

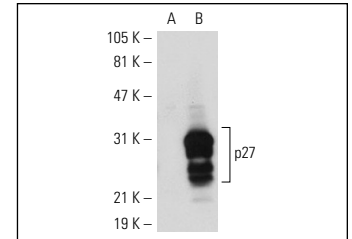
STORAGE

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

DATA



p27 (M-197): sc-776. Western blot analysis of p27 expression in non-transfected: sc-110760 (A) and human p27 transfected: sc-129376 (B) 293 whole cell lysates.



p27 (M-197): sc-776. Western blot analysis of p27 expression in non-transfected: sc-110760 (A) and human p27 transfected: sc-110470 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

- Fang, F., et al. 1996. Dependence of cyclin E-CDK2 kinase activity on cell anchorage. *Science* 271: 499-502.
- Beffy, P., et al. 2010. Altered signal transduction pathways and induction of autophagy in human myotonic dystrophy type 1 myoblasts. *Int. J. Biochem. Cell Biol.* 42: 1973-1983.
- Xie, R., et al. 2011. Microtubule-associated protein 1S (MAP1S) bridges autophagic components with microtubules and mitochondria to affect autophagosomal biogenesis and degradation. *J. Biol. Chem.* 286: 10367-10377.
- Wei, Q., et al. 2007. Galectin-4 is involved in p27-mediated activation of the myelin basic protein promoter. *J. Neurochem.* 101: 1214-1223.
- Sistrunk, C., et al. 2011. Skp2 is necessary for myc-induced keratinocyte proliferation but dispensable for myc oncogenic activity in the oral epithelium. *Am. J. Pathol.* 178: 2470-2477.
- Shi, P., et al. 2011. Dihydrotestosterone induces p27 degradation via direct binding with SKP2 in ovarian and breast cancer. *Int. J. Mol. Med.* 28: 109-114.

RESEARCH USE

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

Try **p27 (F-8): sc-1641** or **p27 (SX53G8.5): sc-53871**, our highly recommended monoclonal alternatives to p27 (M-197). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p27 (F-8): sc-1641**.