SANTA CRUZ BIOTECHNOLOGY, INC.

# p-p27 (Thr 198): sc-130603

## BACKGROUND

p27 associates with cyclin and cyclin-dependent kinase complexes to inhibit their kinase activity and contribute to the control of cell proliferation. p27 is phosphorylated on many sites, including threonine 187, *in vivo,* with the predominant phosphorylation site being serine 10. The extent of serine 10 phosphorylation by proline-directed kinase is markedly increased in cells in the $G_0$-$G_1$ phase of the cell cycle compared to cells in the S or M phase. p27 concentration is regulated predominantly by posttranslational mechanisms. p27 is degraded by both the ubiquitin-proteasome pathway and ubiquitin-independent proteolysis. Regulation of ubiquitin-mediated proteolysis is often achieved through ubiquitination of the targeted phosphorylated protein, which renders it more susceptible to degradation.

## REFERENCES


1. Sherr, C.J. 1993. Mammalian $G_1$ cyclins. Cell 73: 1059-1065.
2. El-Deiry, W.S., et al. 1993. WAF1, a potential mediator of p53 tumor suppression. Cell 75: 817-825.
3. Xiong, Y., et al. 1993. p21 is a universal inhibitor of cyclin kinases. Nature 366: 701-704.
4. Serrano, M., et al. 1993. A new regulatory motif in cell cycle control causing specific inhibition of cyclin D/Cdk4. Nature 366: 704-707.
5. Hannon, G.J., et al. 1994. p15INK4B is a potential effector of TGFβ-induced cell cycle arrest. Nature 371: 257-260.
6. Polyak, K., et al. 1994. p27KIP1, a cyclin-Cdk inhibitor, links transforming growth factor β and contact inhibition to cell cycle arrest. Genes Dev. 8: 9-22.
7. Hengst, L., et al. 1994. A cell cycle-regulated inhibitor of cyclin-dependent kinases. Proc. Natl. Acad. Sci. USA 91: 5291-5295.
8. Polyak, K., et al. 1994. Cloning of p27KIP1, a cyclin-dependent kinase inhibitor and a potential mediator of extracellular antimitogenic signals. Cell 78: 59-66.
9. Toyoshima, H., et al. 1994. p27, a novel inhibitor of $G_1$ cyclin-Cdk protein kinase activity, is related to p21. Cell 78: 67-74.


## CHROMOSOMAL LOCATION

Genetic locus: CDKN1B (human) mapping to 12p13.1.

## SOURCE

p-p27 (Thr 198) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Thr 198 phosphorylated p27 of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

p-p27 (Thr 198) is recommended for detection of Thr 198 phosphorylated p27 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of p-p27: 27 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A.

## SELECT PRODUCT CITATIONS


1. Coëffier, M., et al. 2013. Enteral delivery of proteins stimulates protein synthesis in human duodenal mucosa in the fed state through a mammalian target of rapamycin-independent pathway. Am. J. Clin. Nutr. 97: 286-294.


## RESEARCH USE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.