

p27 Kip1 (SX18F7): sc-53906

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 Kip1, has been described as a negative regulator of G₁ progression and speculated to function as a possible mediator of TGF β -induced G₁ arrest. p27 Kip1 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.

SOURCE

p27 Kip1 (SX18F7) is a mouse monoclonal antibody raised against purified GSTp27 Kip1 fusion protein of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p27 Kip1 (SX18F7) is recommended for detection of p27 Kip1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for p27 Kip1 siRNA (h): sc-29429, p27 Kip1 shRNA Plasmid (h): sc-29429-SH and p27 Kip1 shRNA (h) Lentiviral Particles: sc-29429-V.

Molecular Weight of p27 Kip1: 27 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

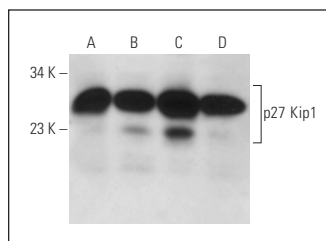
STORAGE

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



p27 Kip1 (SX18F7): sc-53906. Western blot analysis of p27 Kip1 expression in Jurkat (A), HeLa (B), MCF7 (C) and BT-20 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hafeez, B.B., et al. 2008. A dietary anthocyanidin delphinidin induces apoptosis of human prostate cancer PC3 cells *in vitro* and *in vivo*: involvement of nuclear factor- κ B signaling. *Cancer Res.* 68: 8564-8572.
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3. Wang, X.H., et al. 2011. Effects of berberine on human rheumatoid arthritis fibroblast-like synoviocytes. *Exp. Biol. Med.* 236: 859-866.
4. Yan, J., et al. 2012. Andrographolide induces cell cycle arrest and apoptosis in human rheumatoid arthritis fibroblast-like synoviocytes. *Cell Biol. Toxicol.* 28: 47-56.
5. Qi, M., et al. 2015. Inhibition of S-phase kinase-associated protein 2-mediated p27 degradation suppresses tumorigenesis and the progression of hepatocellular carcinoma. *Mol. Med. Rep.* 11: 3934-3940.
6. Liu, T., et al. 2017. CHAF1A, the largest subunit of the chromatin assembly factor 1 complex, regulates the growth of H1299 human non-small cell lung cancer cells by inducing G₀/G₁ cell cycle arrest. *Exp. Ther. Med.* 14: 4681-4686.
7. Tinay, I., et al. 2018. Functional roles and potential clinical application of miRNA-345-5p in prostate cancer. *Prostate* 78: 927-937.
8. Que, W., et al. 2018. Antiproliferation activities of NK4 on multiple myeloma. *Exp. Ther. Med.* 16: 3668-3673.
9. Wu, Z., et al. 2018. EGFR-associated pathways involved in traditional Chinese medicine (TCM)-1-induced cell growth inhibition, autophagy and apoptosis in prostate cancer. *Mol. Med. Rep.* 17: 7875-7885.
10. Zhou, J., et al. 2019. MicroRNA-26a targets the mdm2/p53 loop directly in response to liver regeneration. *Int. J. Mol. Med.* 44: 1505-1514.

PROTOCOLS

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