

# p18 (C-19): sc-864

## BACKGROUND

The normal progression of cells through the cell cycle is under the control of the cyclin dependent protein kinases Cdk4 and Cdk6, which are subject to inhibition by the mitotic inhibitory protein p16. Isolated members of the p16 family have been designated p15 and p18. p15 expression is upregulated approximately 30-fold in TGF $\beta$ -treated human keratinocytes. The gene encoding p15 has been mapped to chromosome 9p21 at a position adjacent to the p16 gene, at a site of frequent chromosomal abnormality in human tumors. It has been suggested that p15 may function as an effector of TGF $\beta$ -mediated cell cycle arrest through inhibition of Cdk4 and Cdk6 kinase. The second p16-related protein, p18, interacts strongly with Cdk6 and to a lesser extent with Cdk4, but lacks apparent interaction with other Cdk. Recombinant p18 has been shown to inhibit cyclin D-Cdk6 kinase activity. In contrast to p21/p27 that form ternary complexes with cyclin-Cdks, only binary complexes of p15, p16 and p18 have been identified in association with Cdk4 and/or Cdk6.

## REFERENCES

1. Serrano, M., et al. 1993. A new regulatory motif in cell cycle control causing specific inhibition of cyclin D/Cdk4. *Nature* 366: 704-707.
2. Sherr, C.J. 1994. G<sub>1</sub> phase progression: cycling on cue. *Cell* 79: 551-555.

## CHROMOSOMAL LOCATION

Genetic locus: CDKN2C (human) mapping to 1p32.3; Cdkn2c (mouse) mapping to 4 C7.

## SOURCE

p18 (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of p18 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-864 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p18 (C-19) is recommended for detection of p18 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for p18 siRNA (h): sc-36145, p18 siRNA (m): sc-36146, p18 shRNA Plasmid (h): sc-36145-SH, p18 shRNA Plasmid (m): sc-36146-SH, p18 shRNA (h) Lentiviral Particles: sc-36145-V and p18 shRNA (m) Lentiviral Particles: sc-36146-V.

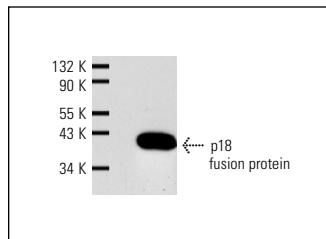
Molecular Weight of p18: 18 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, COLO320 DM cell lysate: sc-2226 or C32 nuclear extract: sc-2136.

## 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 A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



p18 (C-19): sc-864. Western blot analysis of mouse recombinant p18 fusion protein.

## SELECT PRODUCT CITATIONS

1. Simons, M., et al. 2001. Involvement of lipid rafts in nephrin phosphorylation and organization of the glomerular slit diaphragm. *Am. J. Pathol.* 159: 1069-1077.
2. Schmetsdorf, S., et al. 2007. Constitutive expression of functionally active cyclin-dependent kinases and their binding partners suggests noncanonical functions of cell cycle regulators in differentiated neurons. *Cereb. Cortex* 17: 1821-1829.
3. Graham, C., et al. 2013. Kaposi's sarcoma-associated herpesvirus oncoprotein K13 protects against B cell receptor-induced growth arrest and apoptosis through NF $\kappa$ B activation. *J. Virol.* 87: 2242-2252.

## 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.


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Try **p18 (118.2): sc-9965** or **p18 (H-7): sc-514580**, our highly recommended monoclonal alternatives to p18 (C-19).