Store at –20°C

#4824

p16 INK4A Antibody

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

Orders ■ 877-616-CELL (2355)
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info@cellsignal.com
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Entrez-Gene ID # 1029
Swiss-Prot Acc. # P42771

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H	16 kDa	Rabbit**

Background: Cyclin-dependent kinases (CDKs) are activated in part by forming complexes with cyclins. For example, CDK4 and CDK6 associate with the D-type cyclins and phosphorylate the retinoblastoma protein. This phosphorylation is a necessary event for cells to enter S-phase (1). The inhibitors of CDK4 (INK4) family include p15 INK4B, p16 INK4A, p18 INK4C and p19 INK4D. p18 has been shown to function as a haploinsufficient tumor suppressor in vivo (2). All INK4 proteins are composed of 32 amino acid ankyrin motifs and selectively inhibit CDK4/6 activity. Mutational analyses of p18 implicate the third and the amino-terminal portion of the fourth ankyrin repeat in mediating binding to CDK4/6 (3). The interaction of INK4 family members can be a binary complex with CDK4/6 or ternary complex with cyclin D-bound CDK4/6 and ultimately results in the inhibition of cell cycle progression (4,5).

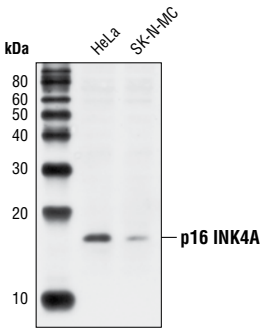
p16 INK4A directly inhibits the activity of cyclin D, thereby inhibiting S-phase entry (6,7). As such, expression of p16 INK4A is commonly associated with cellular senescence, and disruption of the p16 INK4A gene is frequently observed in human cancers.

Specificity/Sensitivity: p16 INK4A Antibody detects endogenous levels of p16 INK4A protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues within the carboxy-terminal region of human p16 INK4A. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

(1) Lukas, J. et al. (1996) *Mol. Cell. Biol.* 16, 6917–6925.
(2) Bai, F. et al. (2003) *Mol. Cell. Biol.* 23, 1269–1277.
(3) Noh, S.J. et al. (1999) *Cancer Res.* 59, 558–564.
(4) Guan, K.L. et al. (1994) *Genes Dev.* 8, 2939–2952.
(5) Hirai, H. et al. (1995) *Mol. Cell. Biol.* 15, 2672–2681.
(6) Sherr, C.J. (2001) *Nat. Rev. Mol. Cell Biol.* 2, 731–737.
(7) Lowe, S.W. and Sherr, C.J. (2003) *Curr. Opin. Genet. Dev.* 13, 77–83.



Western blot analysis of extracts from HeLa and SK-N-MC cells, using p16 INK4A Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.