Store at –20°C

#2557

p57 Kip2 Antibody

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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Entrez-Gene ID #1028
Swiss-Prot Acc. #P46527

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IF-IC	H	57 kDa	Rabbit**
Endogenous			

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
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:100

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.

Background: p27 Kip1 is a member of the Cip/Kip family of cyclin-dependent kinase inhibitors. Like its relatives, p57 Kip2 and p21 Waf1/Cip1, the ability to enforce the G1 restriction point is derived from its inhibitory binding to CDK2/cyclin E and other CDK/cyclin complexes. Expression levels of p27 are upregulated in quiescent cells and in cells treated with cAMP or other negative cell cycle regulators. Downregulation of p27 can be induced by treatment with interleukin 2 or other mitogens; this involves phosphorylation of p27 and its degradation by the ubiquitin-proteasome pathway (1–4).

Levels of p57 Kip2 are controlled by ubiquitination/degradation via the Skp1/Cul1/F-box-type E3 ubiquitin ligase complex SCF-Skp2, and this effect is dependent on Thr310 (5). A similar threonine phosphorylation site in p27 Kip1, Thr187, has also been shown to regulate protein stability (6).

Specificity/Sensitivity: p57 Kip2 Antibody detects endogenous levels of total p57 Kip2 protein. The antibody does not recognize p27 Kip1.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids near the carboxy terminus of human p57 Kip2. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

(1) Lloyd, R.V. et al. (1999) *Am. J. Pathol.* 154, 313–323.

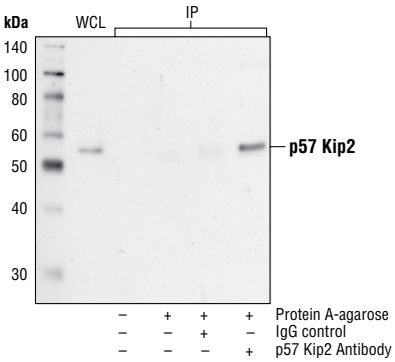
(2) Polyak, K. et al. (1994) *Genes Dev.* 8, 9–22.

(3) Kato, J.Y. et al. (1994) *Cell* 79, 487–496.

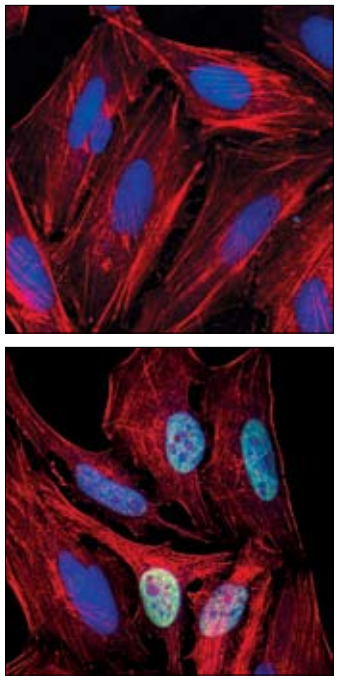
(4) Vlach, J. et al. (1997) *EMBO J.* 16, 5334–5344.

(5) Kamura, T. et al. (2003) *Proc. Natl. Acad. Sci. USA* 100, 10231–10236.

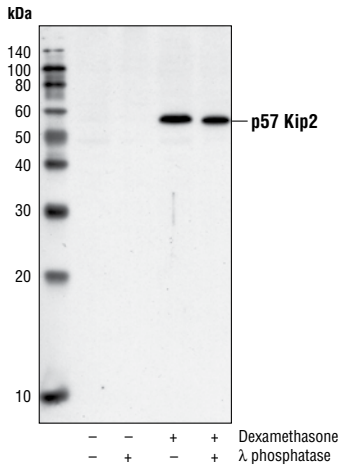
(6) Ishida, N. et al. (2000) *J. Biol. Chem.* 275, 25146–25154.



Western blot analysis, using a different p57 Kip2 mouse monoclonal antibody, of whole cell lysate from dexamethasone-treated (50 nM, 16h) HeLa cells (lane 1) and of p57 Kip2 immunoprecipitated from the same lysate using p57 Kip2 Antibody #2557 (lane 5). Lanes 2-4 represent controls for the immunoprecipitation experiment, as indicated.



Confocal immunofluorescent analysis of HeLa cells, untreated (left) or dexamethasone-treated (right), using p57 Kip2 Antibody (green). Actin filaments were labeled with DY-554 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Western blot analysis of extracts from HeLa cells, untreated or treated with dexamethasone (50 nM, 16h) alone or with λ phosphatase, using p57 Kip2 Antibody #2557.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% 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.