

Phospho-p57 Kip2 (Thr310) Antibody

Small 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

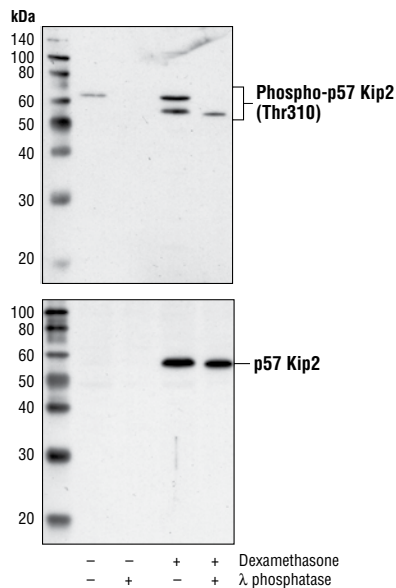
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	H	57 kDa	Rabbit**

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: Phospho-p57 Kip2 (Thr310) Antibody detects endogenous levels of p57 Kip2 only when phosphorylated at threonine 310. This antibody may cross-react with p27 Kip1 when phosphorylated at Thr187.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr310 of human p57 Kip2. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from untreated and dexamethasone-treated (50 nM, 16 h) HeLa cells, using Phospho-p57 Kip2 (Thr310) Antibody (upper) and p57 Kip2 Antibody #2557 (lower). Lysates were treated with λ phosphatase NEB#P0753 (10,000 U/ml for 30 mins) to confirm the phospho-specificity of the phospho-antibody.

Entrez-Gene ID #1028
Swiss-Prot Acc. # P49918

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
Immunofluorescence (IF-IC) 1:100

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

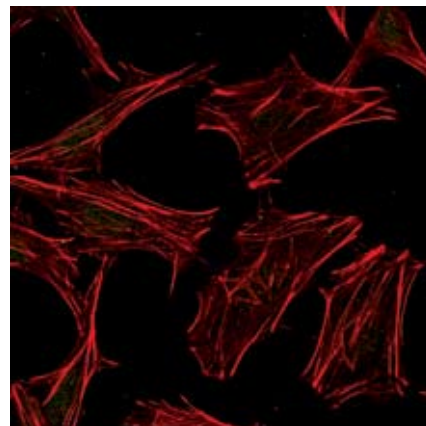
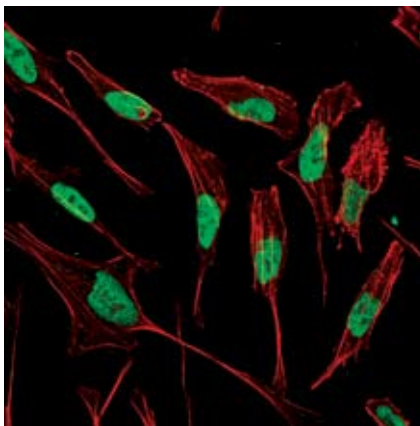
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background 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.

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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.



◀Confocal immunofluorescent analysis of HeLa cells, dexamethasone-treated (left) or phosphatase-treated (right), labeled with Phospho-p57 Kip2 (Thr310) Antibody (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red).

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.