

# Skp2 Antibody

✓ 100 µl  
(10 Western mini-blot)

rev. 08/19/08

This product is for *in vitro* research use only and is not intended for use in humans or animals.  
This product is not intended for use as a therapeutic or in diagnostic procedures.



**Orders** ■ 877-616-CELL (2355)  
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**Support** ■ 877-678-TECH (8324)  
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**Web** ■ www.cellsignal.com

Entrez-Gene ID #6502  
Swiss-Prot Acc. #Q13309

**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) 1:50

**For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

#### Companion Products:

UBC3 Antibody #4997  
UBC3B Antibody #4996  
p27 Kip1 Antibody #2552  
Cyclin A (BF683) Mouse mAb #4656  
Ubiquitin (P4D1) Mouse mAb #3936  
Phototope<sup>®</sup>-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071  
Anti-rabbit IgG, HRP-linked Antibody #7074  
Prestained Protein Marker, Broad Range (Premixed Format) #7720  
Biotinylated Protein Ladder Detection Pack #7727  
20X LumiGLO<sup>®</sup> Reagent and 20X Peroxide #7003

#### Background References:

- (1) Pagano, M. (2004) *Mol. Cell* 14, 414–416.
- (2) Reed, S.I. (2003) *Nature Rev. Mol. Cell Biol.* 4, 855–864.
- (3) Zhang, H. et al. (1995) *Cell* 82, 915–925.
- (4) Nakayama, K. et al. (2004) *Dev. Cell* 6(5), 661–672.
- (5) Bornstein, G. et al. (2003) *J. Biol. Chem.* 278(28), 25752–25757.
- (6) Tedesco, D. et al. (2002) *Genes Dev.* 16(22), 2946–2957.
- (7) Bloom, J. and Pagano, M. (2003) *Semin. Cancer Biol.* 13(1), 41–47.

**Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.**

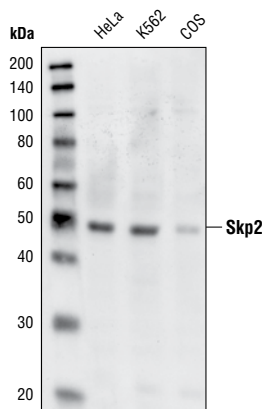
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	H, Mk	48 kDa	Rabbit**

**Background:** Members of the F-box family of proteins are characterized by the approximate 40 amino acid F-box motif named after cyclin F (1,2). F-box proteins constitute one of the four subunits of the SCF (Skp1-Cullin-F-box) ubiquitin ligase complex. The substrate specificity of SCF complexes is determined by the interchangeable F-box proteins, which act as adaptors by associating with phosphorylated substrate proteins and recruiting them to the SCF core. F-box proteins contain two fundamental domains: the F-box motif mediates binding to Skp1 and a leucine rich repeat (LRR) domain mediates substrate interactions.

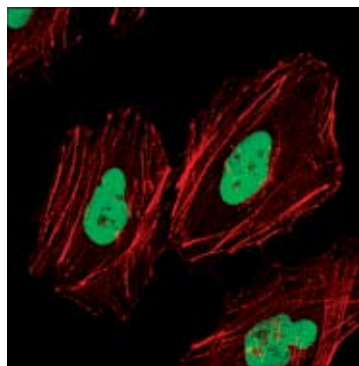
Skp2 (S phase kinase-associated protein 2) interacts with cyclin A/CDK2 and mediates proper G1 to S and G2 to M phase transitions by targeting the cyclin-dependent kinase (CDK) inhibitors p27, p21, p130 and the FOXO1 transcription factor for ubiquitylation and subsequent proteolysis (3,4,5,6). Skp2 protein expression is low in G0 and early G1 phase, increases during late G1 phase, and peaks during S and G2 phases. Inactivation of Skp2 results in S/G2-phase arrested cells with endoduplication and multiple centrosomes (4). Overexpression of Skp2 results in increased CDK activity and contributes to the deregulated proliferation and genetic instabilities typical of cancer cells (7). Increased Skp2/decreased p27 levels are associated with many aggressive lymphomas and human carcinomas such as colon, breast, prostate and lung cancers (7).

**Specificity/Sensitivity:** This antibody detects endogenous levels of Skp2 protein ( $\alpha$ ,  $\beta$ , and  $\gamma$  isoforms). The antibody does not cross-react with other Skp proteins.

**Source/Purification:** Polyclonal antibodies are produced by immunizing rabbits with a synthetic peptide (KLH-coupled) corresponding to amino acids at the amino terminus of human Skp2 protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from HeLa, K562 and COS cells using Skp2 Antibody.



Confocal immunofluorescent analysis of HeLa cells using Skp2 Antibody (green). Actin filaments have been labeled with Alexa Fluor<sup>®</sup> 555 phalloidin (red). Blue pseudocolor = DRAQ5<sup>™</sup> (fluorescent DNA dye).

**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—zebra fish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.