

#4313 Store at -20°C

Skp2 (L70) Antibody


Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IF-IC	H M R Mk	Endogenous	48	Rabbit	#Q13309	6502

Product Usage Information

Application

Western Blotting
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:200

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.

Specificity / Sensitivity

Skp2 (L70) Antibody detects endogenous levels of Skp2 protein (α, β, and γ isoforms). The antibody does not cross-react with other Skp proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu70 of human Skp2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

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 Skp1-Cullin-F-box (SCF) 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 (3-6). 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).

Background References

1. Pagano, M. (2004) *Mol Cell* 14, 414-6.
2. Reed, S.I. (2003) *Nat Rev Mol Cell Biol* 4, 855-64.
3. Zhang, H. et al. (1995) *Cell* 82, 915-25.
4. Nakayama, K. et al. (2004) *Dev Cell* 6, 661-72.
5. Bornstein, G. et al. (2003) *J Biol Chem* 278, 25752-7.
6. Tedesco, D. et al. (2002) *Genes Dev* 16, 2946-57.
7. Bloom, J. and Pagano, M. (2003) *Semin Cancer Biol* 13, 41-7.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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