

#4997 Store at -20°C

# UBC3 Antibody



✓ 100 µl  
(10 western blots)

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

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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.

**Entrez-Gene ID** #54926, 997  
**Swiss-Prot Acc.** #Q712K3, P49427

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, F Endogenous	H, M, R	32 kDa	Rabbit**

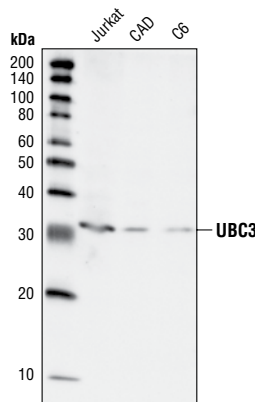
**Background:** Ubiquitin can be covalently linked to many cellular proteins by the ubiquitination process, which targets proteins for degradation by the 26S proteasome. Three components are involved in the target protein-ubiquitin conjugation process. Ubiquitin is first activated by forming a thioester complex with the activation component E1; the activated ubiquitin is subsequently transferred to the ubiquitin-carrier protein E2, and then from E2 to ubiquitin ligase E3 for final delivery to the epsilon-NH2 of the target protein lysine residue (1-3). Combinatorial interactions of different E2 and E3 proteins result in substrate specificity (4). Recent data suggest that activated E2 associates transiently with E3, and that the dissociation is a critical step for ubiquitination (5). UBC3, the mammalian orthologue of yeast Cdc34, and UBC3B, a UBC3 family member, are E2 ubiquitin-carrier proteins. These proteins contain a conserved core domain containing a cysteine residue, which forms the thioester bond with ubiquitin (6). UBC3 in concert with the SCFSkp2 (Skp1, Cullin and F-box protein/Skp2) complex mediates cell cycle progression from G1 to S phase by targeting the CDK inhibitor p27 for proteolysis (7). UBC3B in concert with the SCFb-Trcp (Skp1, Cullin and F-box protein/b-Trcp) complex mediates degradation of b-catenin (6).

**Specificity/Sensitivity:** UBC3 Antibody detects endogenous levels of total UBC3 and UBC3B protein.

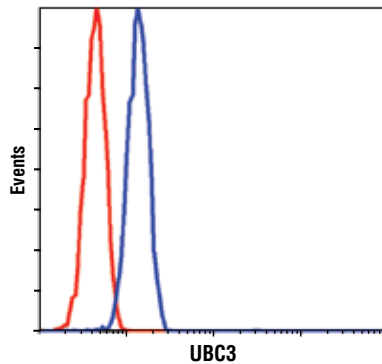
**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of human UBC3. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

- (1) Ciechanover, A. (1998) *EMBO J.* 17, 7151-7160.
- (2) Hochstrasser, M. (2000) *Nat. Cell Biol.* 2, E153-E157.
- (3) Hochstrasser, M. (2000) *Science* 289, 563-564.
- (4) DeSalle, L.M. and Pagano, M. (2001) *FEBS Lett.* 490, 179-189.
- (5) Deffenbaugh, A. E. et al. (2003) *Cell* 114, 611-622.
- (6) Semplici, F. et al. (2002) *Oncogene* 21, 3978-3987.
- (7) Pagano, M. et al. (1995) *Science* 269, 682-685.



Western blot analysis of extracts from Jurkat, CAD and C6 cells using UBC3 Antibody.



Flow cytometric analysis of untreated Jurkat cells using UBC3 antibody (blue) compared to a nonspecific negative control antibody (red).

**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  
Flow Cytometry 1:25

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

Please visit [www.cellsignal.com](http://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.