

Ubiquitin (E4I2J) Rabbit mAb

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: W	Reactivity: All	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P62987, #P0CG48, #P0CG47, #P62979	Entrez-Gene Id: 7311, 7316, 7314, 6233
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Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
Specificity/Sensitivity	Ubiquitin (E4I2J) Rabbit mAb recognizes endogenous levels of free ubiquitin and polyubiquitinated proteins. This antibody is able to detect free ubiquitin, linear polyubiquitin (M1-linked), and homotypic polyubiquitin chains consisting of K6, K11, K27, K29, K33, K48 and K63 linkages.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly35 of human ubiquitin protein.	
Background	Ubiquitin is a conserved polypeptide unit that plays an important role in the ubiquitin-proteasome pathway. 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 thiolester complex with the activation component E1; the activated ubiquitin is subsequently transferred to the ubiquitin-carrier protein E2, then from E2 to ubiquitin ligase E3 for final delivery to the epsilon-NH ₂ of the target protein lysine residue (1-3). The ubiquitin-proteasome pathway has been implicated in a wide range of normal biological processes and in disease-related abnormalities. Several proteins such as IκB, p53, cdc25A, and Bcl-2 have been shown to be targets for the ubiquitin-proteasome process as part of regulation of cell cycle progression, differentiation, cell stress response, and apoptosis (4-7).	
Background References	<ol style="list-style-type: none"> 1. Ciechanover, A. (1998) <i>EMBO J</i> 17, 7151-60. 2. Hochstrasser, M. (2000) <i>Nat Cell Biol</i> 2, E153-7. 3. Hochstrasser, M. (2000) <i>Science</i> 289, 563-4. 4. Bernardi, R. et al. (2000) <i>Oncogene</i> 19, 2447-54. 5. Aberle, H. et al. (1997) <i>EMBO J</i> 16, 3797-804. 6. Salomoni, P. and Pandolfi, P.P. (2002) <i>Nat Cell Biol</i> 4, E152-3. 7. Jesenberger, V. and Jentsch, S. (2002) <i>Nat Rev Mol Cell Biol</i> 3, 112-21. 	

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	W: Western Blotting
Cross-Reactivity Key	All: All Species Expected
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