



**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

Store at -20C  
#5621

## K63-linkage Specific Polyubiquitin (D7A11) Rabbit mAb

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

<b>Applications:</b> W	<b>Reactivity:</b> All	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG
---------------------------	---------------------------	-----------------------------------	--------------------------------------

Product Usage Information	Application	Dilution
<b>Storage</b>	Western Blotting	1:1000
<b>Specificity/Sensitivity</b>	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.	
<b>Source / Purification</b>	K63-linkage Specific Polyubiquitin (D7A11) Rabbit mAb detects polyubiquitin chains formed by Lys63 residue linkage. It does not react with monoubiquitin or polyubiquitin chains formed by linkage to a different lysine residue.	
<b>Background</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding the Lys63 branch of the human diubiquitin chain.	
<b>Background References</b>	<p>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<sub>2</sub> 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).</p> <p>Substrate proteins are linked to ubiquitin using seven distinct ubiquitin lysine residues (Lys6, Lys11, Lys27, Lys29, Lys33, Lys48, and Lys63). Formation of a polyubiquitin chain occurs when a lysine residue of ubiquitin is linked to the carboxy-terminal glycine of another ubiquitin. Proteins polyubiquitinated at specific lysine residues display a tendency to be targeted for different processes (8). K63-linked polyubiquitin chains exert nonproteolytic functions in vivo, such as protein trafficking, kinase/phosphatase activation, and DNA damage control, all of which might be important in regulation of cancer survival and development (9,10).</p> <ol style="list-style-type: none"> <li>1. Ciechanover, A. (1998) <i>EMBO J</i> 17, 7151-60.</li> <li>2. Hochstrasser, M. (2000) <i>Nat Cell Biol</i> 2, E153-7.</li> <li>3. Hochstrasser, M. (2000) <i>Science</i> 289, 563-4.</li> <li>4. Bernardi, R. et al. (2000) <i>Oncogene</i> 19, 2447-54.</li> <li>5. Aberle, H. et al. (1997) <i>EMBO J</i> 16, 3797-804.</li> <li>6. Salomoni, P. and Pandolfi, P.P. (2002) <i>Nat Cell Biol</i> 4, E152-3.</li> <li>7. Jesenberger, V. and Jentsch, S. (2002) <i>Nat Rev Mol Cell Biol</i> 3, 112-21.</li> <li>8. Komander, D. (2009) <i>Biochem Soc Trans</i> 37, 937-53.</li> <li>9. Chen, Z.J. and Sun, L.J. (2009) <i>Mol Cell</i> 33, 275-86.</li> <li>10. Yang, W.L. et al. (2010) <i>Oncogene</i> 29, 4493-503.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>W:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>All:</b> All Species Expected

## Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

## Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.