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#12805**K48-linkage Specific Polyubiquitin (D9D5)
Rabbit mAb (HRP Conjugate)**
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Applications: W	Reactivity: All	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG
Product Usage Information	Application Western Blotting		Dilution 1:1000
Storage	Supplied in 140 mM NaCl, 3 mM KCl, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at -20°C. <i>Do not aliquot the antibody.</i>		
Specificity/Sensitivity	K48-linkage Specific Polyubiquitin (D9D5) Rabbit mAb (HRP Conjugate) detects polyubiquitin chains formed by Lys48 residue linkage. This antibody does not react with monoubiquitin or polyubiquitin chains formed by specific linkage to a different lysine residue.		
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding the Lys48 branch of the human diubiquitin chain.		
Description	This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated K48-linkage Specific Polyubiquitin (D9D5) Rabbit mAb #8081.		
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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