

K48-linkage Specific Polyubiquitin (D9D5) Rabbit mAb (HRP Conjugate)

✓ 100 µl
(10 western blots)



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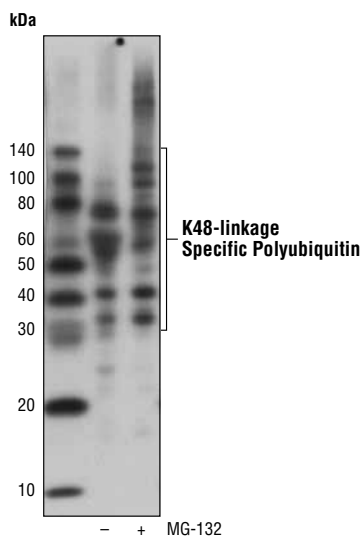
Applications W Endogenous	Species Cross-Reactivity* All	Isotype Rabbit IgG
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Description: This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody 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 thioester 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-NH₂ 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).

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.



Western blot analysis of extracts from HeLa cells, untreated (-) or treated with the proteasome inhibitor MG-132 #2194 (10 µM, 6 hr; +), using K48-linkage Specific Polyubiquitin (D9D5) Rabbit mAb (HRP Conjugate).

UniProt ID #P62988

Storage: Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.

***Species cross-reactivity is determined by western blot using the unconjugated antibody.**

HRP-conjugated antibodies do not require incubation with a secondary antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

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) Bernardi, R. et al. (2000) *Oncogene* 19, 2447-2454.
- (5) Aberle, H. et al. (1997) *EMBO J.* 16, 3797-3804.
- (6) Salomoni, P. and Pandolfi, P.P. (2002) *Nat. Cell Biol.* 4, E152-E153.
- (7) Jesenberger, V. and Jentsch, S. (2002) *Nat. Rev. Mol. Cell Biol.* 3, 112-121.

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.