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Store at -20C
#5641

Ubc12 (D13D7) Rabbit mAb

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

Applications: W, IP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 21	Source/Isotype: Rabbit IgG	UniProt ID: #P61081	Entrez-Gene Id: 9040
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

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

Ubc12 (D13D7) Rabbit mAb detects endogeneous levels of total Ubc12 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys36 of human Ubc12 protein.

Background

Similar to ubiquitin, NEDD8 is covalently linked to target proteins through an enzymatic cascade composed of NEDD8-specific E1 (activating)- and E2 (conjugating)-enzymes (1,2). The E2 ligase specific for NEDD8 is Ubc12 (3-5). Ubc12 forms a heterodimeric conjugate with NEDD8 in order to catalyze the transfer of NEDD8 from E1 to lysine side chains of target proteins (1,2). Well known targets of NEDD8 are cullin-based RING E3 ligases. Neddylation of cullin isoforms activates the related ubiquitin E3 complex by promoting its interaction with a cognate ubiquitin-E2 ligase (6-7). Neddylation of Cul-1 complexes containing βTrCP and SKP2 has been shown to be required for controlling the stability of important signaling targets such as IκB, NF-κB, and p27 Kip (8-10), thereby regulating cell cycle progression, signaling cascades, and developmental programming processes (11).

Background References

- Huang, D.T. et al. (2007) *Nature* 445, 394-8.
- Huang, D.T. et al. (2005) *Mol Cell* 17, 341-50.
- Liakopoulos, D. et al. (1998) *EMBO J* 17, 2208-14.
- Gong, L. and Yeh, E.T. (1999) *J Biol Chem* 274, 12036-42.
- Wada, H. et al. (2000) *J Biol Chem* 275, 17008-15.
- Sakata, E. et al. (2007) *Nat Struct Mol Biol* 14, 167-8.
- Kawakami, T. et al. (2001) *EMBO J* 20, 4003-12.
- Podust, V.N. et al. (2000) *Proc Natl Acad Sci USA* 97, 4579-84.
- Wu, K. et al. (2002) *J Biol Chem* 277, 516-27.
- Amir, R.E. et al. (2002) *J Biol Chem* 277, 23253-9.
- Herrmann, J. et al. (2007) *Circ Res* 100, 1276-91.

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 **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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