Revision 1

#4330 Store at -20C

UbcH5C (D60E2) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	14	Rabbit IgG	#P61077	7323

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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

UbcH5C (D60E2) Rabbit mAb detects endogenous levels of total UbcH5C protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp135 of human UbcH5C protein.

Background

Protein ubiquitination requires the concerted action of the E1, E2 and E3 ubiquitin-conjugating enzymes. Ubiquitin is first activated through an ATP-dependent formation of a thiol ester with an E1 enzyme. The activated ubiquitin is then transferred to a thiol-group of an E2 ubiquitin-conjugation enzyme. The final step is the transfer of ubiquitin from E2 to an ε-amino group of a lysine residue on the target protein, a transfer mediated by ubiquitin-conjugating enzyme E3 (1). UbcH5C is a universally expressed E2 ubiquitin conjugating enzyme and member of the UbcH5 family that also includes UbcH5A and UbcH5B (2). Evidence suggests that UbcH5C plays an important role in regulating a number of signaling pathways by catalyzing the ubiquitination of key target proteins, including p53, PCNA, the IκB kinase protein NEMO, and the apoptosis inhibitor BRUCE (3-6). Gene expression profiles revealed increased expression of UbcH5C in meibomian cell carcinoma and oncocytic thyroid adenomas (7,8), while an RNAi screen reveals diffrential Ubc5HC in acute promyelocytic cells (9). These results suggest a potential role of UbcH5C in cell cycle control and tumorigenesis.

Background References

1. Hershko, A. (1988) *J Biol Chem* 263, 15237-40.
2. Jensen, J.P. et al. (1995) *J Biol Chem* 270, 30408-14.
3. Saville, M.K. et al. (2004) *J Biol Chem* 279, 42169-81.
4. Zhang, S. et al. (2008) *Cell Cycle* 7, 3399-404.
5. Tang, E.D. et al. (2003) *J Biol Chem* 278, 37297-305.
6. Qiu, X.B. et al. (2004) *EMBO J* 23, 800-10.
7. Hattori, H. et al. (2007) *Blood* 110, 640-50.
8. Kumar, A. et al. (2007) *Genomics* 90, 559-66.
9. Jacques, C. et al. (2005) *J Clin Endocrinol Metab* 90, 2314-20.

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

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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