

USP13 (D4P3M) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	100	Rabbit IgG	#Q92995	8975

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

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

USP13 (D4P3M) Rabbit mAb recognizes endogenous levels of total USP13 protein. This antibody does not cross-react with USP5/ISOT.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human USP13 protein.

Background

Ubiquitinating enzymes (UBEs) catalyze protein ubiquitination, a reversible process countered by deubiquitinating enzyme (DUB) action (1,2). Five DUB subfamilies are recognized, including the USP, UCH, OTU, MJD, and JAMM enzymes. Ubiquitin carboxyl-terminal hydrolase 13 (USP13; isopeptidase T-3) contains four ubiquitin-associated/translation elongation factor EF1B, amino terminal (UBA) domains and one ubiquitin-specific processing protease (UBP) domain. The UBP domain of USP13 contains a catalytic site, a zinc finger domain, and two UBA domains. Similar to other USP family members, USP13 contains cysteines and histidines that are likely involved in its catalytic mechanism. Studies show that USP13 plays a critical role in autophagy through the deubiquitination of target proteins such as BECN1 and USP10 (3). Research also suggests that USP13 is implicated in the pathogenesis of melanoma through its ability to regulate the ubiquitination status of MITF (4).

Background References

- Chen, M. et al. (2011) *Proc Natl Acad Sci U S A* 108, 9119-24.
- Nijman, S.M. et al. (2005) *Cell* 123, 773-86.
- Liu, J. et al. (2011) *Cell* 147, 223-34.
- Zhao, X. et al. (2011) *Nat Commun* 2, 414.

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

H: Human

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