

Store at  
-20°C  
  
#66310

# USP15 (D1K6S) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, eCLIP	H M R Mk	Endogenous	120	Rabbit IgG	#Q9Y4E8	9958

## Product Usage Information

### Application

Western Blotting  
Immunoprecipitation  
eCLIP

### Dilution

1:1000  
1:200  
1:200

For more information about the RBP-eCLIP service please visit [Eclipsebio](#).

## 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

USP15 (D1K6S) Rabbit mAb recognizes endogenous levels of total USP15 protein. This antibody does not cross-react with either USP4 or USP11 proteins.

## Species predicted to react based on 100% sequence homology

Dog, Pig

## Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human USP15 protein.

## Background

Protein ubiquitination and deubiquitination are reversible processes catalyzed by ubiquitinating enzymes (UBEs) and deubiquitinating enzymes (DUBs), respectively (1,2). DUBs are categorized into five subfamilies based on catalytic domain structure: USP, UCH, OTU, MJD, and JAMM. Ubiquitin carboxyl-terminal hydrolase 15 (USP15) is a USP subfamily deubiquitinating enzyme with similar domain structure to the paralogous DUBs, USP4, and USP11. The *USP15* gene is amplified in glioblastoma and other solid tumors and its high expression correlates with a poor prognosis (3,4). Research studies demonstrate that USP15 is a positive regulator of oncogenic TGF-β signaling and that USP15 deubiquitinates monoubiquitinated R-SMADs to enhance target gene promoter binding (5). USP15 also promotes oncogenic TGF-β signaling by opposing SMURF2-mediated ubiquitination of the type I TGF-β receptor, which facilitates receptor stabilization (3,4). USP15 contributes to oncogenesis by negatively regulating T cell-mediated antitumor responses through the deubiquitination and stabilization of the E3 ubiquitin ligase MDM2. This observation supports USP15 as a potential target for cancer therapeutics (6).

## Background References

1. Nijman, S.M. et al. (2005) *Cell* 123, 773-86.
2. Nalepa, G. et al. (2006) *Nat Rev Drug Discov* 5, 596-613.
3. Zhang, L. et al. (2013) *Mol Cell* 51, 559-72.
4. Eichhorn, P.J. et al. (2012) *Nat Med* 18, 429-35.
5. Inui, M. et al. (2011) *Nat Cell Biol* 13, 1368-75.
6. Zou, Q. et al. (2014) *Nat Immunol* 15, 562-70.

## 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 **eCLIP:** eCLIP

## Cross-Reactivity Key

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

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