Revision 1

#14817 Store at -20C

OTUD7B/Cezanne-1 Antibody

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H Mk	Endogenous	98	Rabbit	#Q6GQQ9	56957

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

OTUD7B/Cezanne-1 Antibody recognizes endogenous levels of total OTUD7B/Cezanne-1 protein. This antibody does not cross-react with either OTUD7A/Cezanne-2 or OTUD7C/A20 proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human OTUD7B/Cezanne-1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Protein ubiquitination and deubiquitination are reversible processes catalyzed by ubiquitinating enzymes and deubiquitinating enzymes respectively (1,2). Deubiquitinating enzymes (DUBS) are categorized into five subfamilies based on catalytic domain structure: USP, UCH, OTU, MJD, and JAMM. The deubiquitinase cellular zinc-finger anti-NF-κB (Cezanne-1, OTUD7B) is an OTU family deubiquitinase that contains amino-terminal catalytic and ubiquitin-associated (UBA) domains, and a carboxy-terminal A20-like zinc finger (A20-ZnF) that is involved in ubiquitin binding (3,4). Research studies demonstrate that Cezanne-1 negatively regulates canonical NF-κB signaling induced by TNF receptor signaling by removing K63-linked ubiquitin chains from the RIP1 adaptor protein (5,6). Cezanne-1 negatively regulates non-canonical NF-κB signaling through the deubiquitination and stabilization of the TRAF3 signal transduction protein (7). Additional research suggests that Cezanne-1 is a breast cancer oncogene as the corresponding *OTUD7B* gene is amplified in a subset of breast cancers and enhances EGFR signaling through a mechanism involving receptor stabilization (8).

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. Mevissen, T.E. et al. (2013) *Cell* 154, 169-84.
4. Evans, P.C. et al. (2003) *J Biol Chem* 278, 23180-6.
5. Evans, P.C. et al. (2001) *Biochem J* 357, 617-23.
6. Enesa, K. et al. (2008) *J Biol Chem* 283, 7036-45.
7. Hu, H. et al. (2013) *Nature* 494, 371-4.
8. Pareja, F. et al. (2012) *Oncogene* 31, 4599-608.

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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