

#14127 Store at -20°C

OTULIN Antibody

Cell Signaling
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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 M R Mk	Endogenous	42, 45	Rabbit	#Q96BN8	90268

Product Usage Information

Application

Western Blotting

Dilution

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

OTULIN Antibody recognizes endogenous levels of total OTULIN protein. This antibody does not cross-react with OTUB1.

Species predicted to react based on 100% sequence homology:

Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human OTULIN protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Protein ubiquitination and deubiquitination are reversible processes catalyzed by ubiquitinating enzymes (UBEs) and deubiquitinating enzymes (DUBs) (1,2). Five subfamilies of DUBs have been characterized to date, and include USP, UCH, OTU, MJD, and JAMM deubiquitinating enzymes (1,2). The ovarian tumor (OTU) DUB subfamily comprises a group of approximately 100 putative cysteine proteases that are homologous to the *Drosophila* ovarian tumor gene product (3). OTU domain-containing deubiquitinase with linear linkage specificity (OTULIN, FAM105B, Gumby) is an OTU subfamily deubiquitinating enzyme that antagonizes the E3 linear ubiquitin chain assembly complex (LUBAC) by promoting disassembly of Met1-linked (linear) ubiquitin chains (4,5). LUBAC and OTULIN regulate NOD2 signaling in an antagonistic manner by controlling the level of Met1-ubiquitinated RIPK2 kinase (6). Binding of the OTULIN PUB-interacting motif to the HOIP subunit of LUBAC is critical for OTULIN inhibition of NF-κB signaling; this OTULIN-HOIP interaction is negatively regulated by tyrosine phosphorylation of OTULIN (7,8). The ability of OTULIN to influence LUBAC function and the presence of linear ubiquitin chains may play an important role in regulating angiogenesis, craniofacial, and neural development (5).

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. Makarova, K.S. et al. (2000) *Trends Biochem Sci* 25, 50-2.
4. Keusekotten, K. et al. (2013) *Cell* 153, 1312-26.
5. Rivkin, E. et al. (2013) *Nature* 498, 318-24.
6. Fiil, B.K. et al. (2013) *Mol Cell* 50, 818-30.
7. Elliott, P.R. et al. (2014) *Mol Cell* 54, 335-48.
8. Schaeffer, V. et al. (2014) *Mol Cell* 54, 349-61.

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 nonfat dry milk, 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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