

#14127 Store at -20C

# 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

<b>Product Usage Information</b>	<b>Application</b>	<b>Dilution</b>
	Western Blotting	1:1000
	Immunoprecipitation	1:50
<b>Storage</b>	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.	
<b>Specificity / Sensitivity</b>	OTULIN Antibody recognizes endogenous levels of total OTULIN protein. This antibody does not cross-react with OTUB1.	
<b>Species predicted to react based on 100% sequence homology:</b>	Pig	
<b>Source / Purification</b>	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.	
<b>Background</b>	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 <i>Drosophila</i> 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).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Nijman, S.M. et al. (2005) <i>Cell</i> 123, 773-86.</li> <li>2. Nalepa, G. et al. (2006) <i>Nat Rev Drug Discov</i> 5, 596-613.</li> <li>3. Makarova, K.S. et al. (2000) <i>Trends Biochem Sci</i> 25, 50-2.</li> <li>4. Keusekotten, K. et al. (2013) <i>Cell</i> 153, 1312-26.</li> <li>5. Rivkin, E. et al. (2013) <i>Nature</i> 498, 318-24.</li> <li>6. Fiil, B.K. et al. (2013) <i>Mol Cell</i> 50, 818-30.</li> <li>7. Elliott, P.R. et al. (2014) <i>Mol Cell</i> 54, 335-48.</li> <li>8. Schaeffer, V. et al. (2014) <i>Mol Cell</i> 54, 349-61.</li> </ol>	
<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
<b>Western Blot Buffer</b>	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.	
<b>Applications Key</b>	<b>WB:</b> Western Blotting <b>IP:</b> Immunoprecipitation	
<b>Cross-Reactivity Key</b>		

**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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