



## Rabbit Anti-OTUB1 antibody

SL11229R

<b>Product Name:</b>	OTUB1
<b>Chinese Name:</b>	Ubiquitin特异性蛋白酶OTB1抗体
<b>Alias:</b>	Deubiquitinating enzyme OTUB1; hOTU1; OTB1; OTU domain containing ubiquitin aldehyde binding protein 1; OTU domain-containing ubiquitin aldehyde-binding protein 1; OTU1; Otub1; OTUB1_HUMAN; Otubain 1; Otubain-1; Ubiquitin specific processing protease OTUB1; Ubiquitin thioesterase OTUB1; Ubiquitin-specific-processing protease OTUB1.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Dog,Cow,Horse,Sheep,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	73kDa
<b>Cellular localization:</b>	cytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human OTUB1:51-150/271
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	OTUB1 is a 271 amino acid protein that contains one OTU (ovarian tumor) domain and belongs to the OTU family of predicted cysteine proteases. Expressed as two isoforms (one of which is present throughout the body and the other of which is present only in

lymphoid tissues), OTUB1 functions as a hydrolase that can remove ubiquitin residues from target proteins, thereby preventing protein degradation and playing an important role in protein turnover. OTUB1 interacts with GRAIL and, via this interaction, plays a role in the regulation and the induction of T-cell anergy, a phenomenon that occurs when T-cells are rendered unresponsive to their cognate antigens. Due to its interaction with GRAIL, OTUB1 is an important regulator of immune responses in secondary lymphoid organs.

**Function:**

Hydrolase that can specifically remove 'Lys-48'-linked conjugated ubiquitin from proteins and plays an important regulatory role at the level of protein turnover by preventing degradation. Regulator of T-cell anergy, a phenomenon that occurs when T-cells are rendered unresponsive to antigen rechallenge and no longer respond to their cognate antigen. Acts via its interaction with RNF128/GRAIL, a crucial inductor of CD4 T-cell anergy. Isoform 1 destabilizes RNF128, leading to prevent anergy. In contrast, isoform 2 stabilizes RNF128 and promotes anergy. Surprisingly, it regulates RNF128-mediated ubiquitination, but does not deubiquitinate polyubiquitinated RNF128. Deubiquitinates estrogen receptor alpha (ESR1). Mediates deubiquitination of 'Lys-48'-linked polyubiquitin chains, but not 'Lys-63'-linked polyubiquitin chains. Not able to cleave di-ubiquitin. Also capable of removing NEDD8 from NEDD8 conjugates, but with a much lower preference compared to 'Lys-48'-linked ubiquitin.

Plays a key non-catalytic role in DNA repair regulation by inhibiting activity of RNF168, an E3 ubiquitin-protein ligase that promotes accumulation of 'Lys-63'-linked histone H2A and H2AX at DNA damage sites. Inhibits RNF168 independently of ubiquitin thioesterase activity by binding and inhibiting UBE2N/UBC13, the E2 partner of RNF168, thereby limiting spreading of 'Lys-63'-linked histone H2A and H2AX marks. Inhibition occurs by binding to free ubiquitin: free ubiquitin acts as an allosteric regulator that increases affinity for UBE2N/UBC13 and disrupts interaction with UBE2V1. The OTUB1-UBE2N/UBC13-free ubiquitin complex adopts a configuration that mimics a cleaved 'Lys48'-linked di-ubiquitin chain.

**Subunit:**

Isoform 1 and isoform 2 interact with RNF128. Isoform 1 forms a ternary complex with RNF128 and USP8. Isoform 1 interacts with the C-terminal UCH catalytic domain of USP8. Isoform 2 does not associate with USP8. Interacts with FUS, ESR1 and GNB2L1/RACK1. Interacts with UBE2N/UBC13.

**Subcellular Location:**

Cytoplasm.

**Tissue Specificity:**

Isoform 1 is ubiquitous. Isoform 2 is expressed only in lymphoid tissues such as tonsils, lymph nodes and spleen, as well as peripheral blood mononuclear cells.

**Similarity:**

Belongs to the peptidase C65 family. Contains 1 OTU domain.

**SWISS:**  
Q96FW1

**Gene ID:**  
55611

**Database links:**

[Entrez Gene: 55611](#)Human

[Entrez Gene: 107260](#)Mouse

[Entrez Gene: 293705](#)Rat

[Omim: 608337](#)Human

[SwissProt: Q96FW1](#)Human

[SwissProt: Q7TQI3](#)Mouse

[SwissProt: B2RYG6](#)Rat

[Unigene: 473788](#)Human

**Important Note:**

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