

# OTUD5 Antibody

Catalog # ASC10771

## Product Information

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| <b>Application</b>           | WB, IF, E, IHC-P                                                                                                                                                                                                     |
| <b>Primary Accession</b>     | <a href="#">Q96G74</a>                                                                                                                                                                                               |
| <b>Other Accession</b>       | <a href="#">EAW50723</a> , <a href="#">119571108</a>                                                                                                                                                                 |
| <b>Reactivity</b>            | Human, Mouse, Rat                                                                                                                                                                                                    |
| <b>Host</b>                  | Rabbit                                                                                                                                                                                                               |
| <b>Clonality</b>             | Polyclonal                                                                                                                                                                                                           |
| <b>Isotype</b>               | IgG                                                                                                                                                                                                                  |
| <b>Calculated MW</b>         | 60626                                                                                                                                                                                                                |
| <b>Concentration (mg/ml)</b> | 1 mg/mL                                                                                                                                                                                                              |
| <b>Conjugate</b>             | Unconjugated                                                                                                                                                                                                         |
| <b>Application Notes</b>     | OTUD5 antibody can be used for detection of OTUD5 by Western blot at 1 - 2 $\mu$ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 $\mu$ g/mL. For immunofluorescence start at 20 $\mu$ g/mL. |

## Additional Information

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| <b>Gene ID</b>                      | 55593                                                                                                                                                                                                                                         |
| <b>Other Names</b>                  | OTU domain-containing protein 5, 3.4.19.12, Deubiquitinating enzyme A, DUBA, OTUD5                                                                                                                                                            |
| <b>Target/Specificity</b>           | OTUD5;                                                                                                                                                                                                                                        |
| <b>Reconstitution &amp; Storage</b> | OTUD5 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures. |
| <b>Precautions</b>                  | OTUD5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.                                                                                                                                              |

## Protein Information

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| <b>Name</b>     | OTUD5 ( <a href="#">HGNC:25402</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Function</b> | Deubiquitinating enzyme that functions as a negative regulator of the innate immune system (PubMed: <a href="#">17991829</a> , PubMed: <a href="#">22245969</a> , PubMed: <a href="#">23827681</a> , PubMed: <a href="#">33523931</a> ). Has peptidase activity towards 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains (PubMed: <a href="#">22245969</a> ). Can also cleave 'Lys-11'-linked ubiquitin chains (in vitro) (PubMed: <a href="#">22245969</a> ). Acts via TRAF3 deubiquitination and subsequent suppression of type I interferon (IFN) production (PubMed: <a href="#">17991829</a> ). Controls neuroectodermal differentiation through cleaving 'Lys-48'-linked ubiquitin chains to counteract degradation of select chromatin regulators such as ARID1A, HDAC2 and HCF1 |

(PubMed:[33523931](#)). Acts as a positive regulator of mTORC1 and mTORC2 signaling following phosphorylation by MTOR: acts by mediating deubiquitination of BTRC, leading to its stability (PubMed:[33110214](#)).

**Cellular Location**

Nucleus.

**Tissue Location**

Expressed in various tissues, including the liver and placenta, as well as in peripheral blood leukocytes

## Background

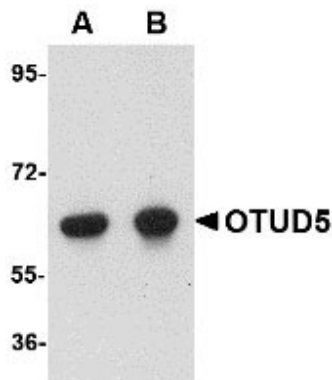
**OTUD5 Antibody:** OTUD5 is a member of the OTU (ovarian tumor) domain-containing cysteine protease superfamily. The OTU domain confers deubiquitinase activity and OTUD5 has been shown to suppress the type I interferon (IFN-I)-dependent innate immune response by cleaving the polyubiquitin chain from TRAF3, an essential type I interferon adaptor protein. Cleavage results in disassociation of TRAF3 from a downstream signaling complex containing TBK1 and the disruption of the IFN-I signaling cascade, indicating that OTUD5 acts as a negative regulator of innate immune responses. It has been suggested that by suppressing IFN-I production, OTUD5 may function to inhibit the emergence of certain autoimmune disorders such as systemic lupus erythematosus. Multiple isoforms of OTUD5 are known to exist.

## References

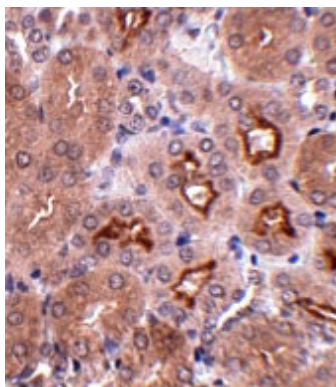
Kayagi N, Phung Q, Chan S, et al. DUBA: A deubiquitinase that regulates type I interferon production. *Science* 2007; 318:1628-32.

Borodovsky A, Ovaa H, Kolli N, et al. Chemistry-based functional genomics reveals novel members of the deubiquitinating enzyme family. *Chem. Biol.* 2002; 10:1149-59.

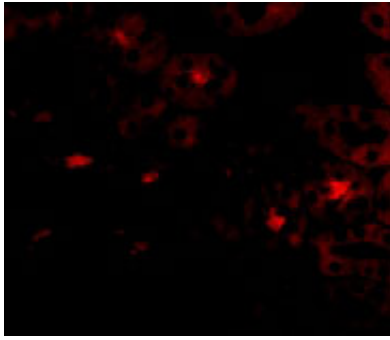
## Images



Western blot analysis of OTUD5 in human kidney lysate with OTUD5 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of OTUD5 in mouse kidney tissue with OTUD5 antibody at 2.5 µg/mL.



Immunofluorescence of OTUD5 in Human Kidney cells with OTUD5 antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.