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OTUD5 Antibody

Catalog # ASC10771

Product Information

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

Additional Information

Gene ID	55593
Other Names	OTU domain-containing protein 5, 3.4.19.12, Deubiquitinating enzyme A, DUBA, OTUD5
Target/Specificity	OTUD5;
Reconstitution & Storage	OTUD5 antibody can be stored at 4℃ for three months and -20℃, 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.
Precautions	OTUD5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	OTUD5 (HGNC:25402)
Function	Deubiquitinating enzyme that functions as a negative regulator of the innate immune system (PubMed:17991829, PubMed:22245969, PubMed:23827681, PubMed:33523931). Has peptidase activity towards 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains (PubMed:22245969). Can also cleave 'Lys-11'-linked ubiquitin chains (in vitro) (PubMed:22245969). Acts via TRAF3 deubiquitination and subsequent suppression of type I interferon (IFN) production (PubMed:17991829). 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

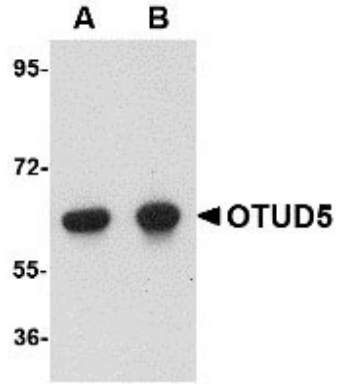
Background

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.

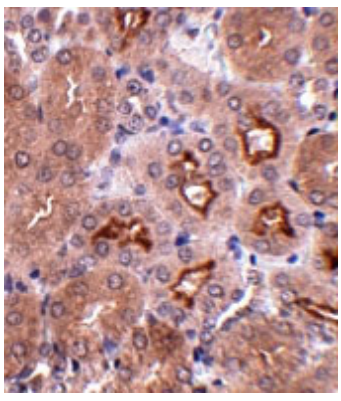
References

Kayagi N, Phung Q, Chan S, et al. DUBA: A deubiquitinase that regultes type I interferon production. Science2007; 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.

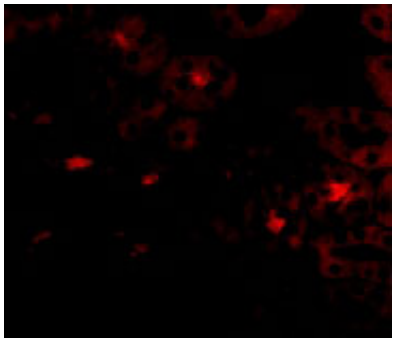
Images



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'.