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UBC13 Antibody

Catalog # ASC10262

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P61088
Other Accession	AAP35519, 30582585
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	17138
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	UBC13 antibody can be used for detection of UBC13 by Western blot at 0.5 to 2 □g/mL. Antibody can also be used for immunohistochemistry starting at 2 □g/mL. For immunofluorescence start at 10 □g/mL.

Additional Information

Gene ID	7334
Other Names	UBC13 Antibody: UBC13, UbcH13, HEL-S-71, UbcH-ben, BLU, Ubiquitin-conjugating enzyme E2 N, Bendless-like ubiquitin-conjugating enzyme, ubiquitin-conjugating enzyme E2N (UBC13 homolog, yeast)
Target/Specificity	UBE2N;
Reconstitution & Storage	UBC13 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	UBC13 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	UBE2N
Synonyms	BLU
Function	The UBE2V1-UBE2N and UBE2V2-UBE2N heterodimers catalyze the synthesis of non-canonical 'Lys-63'-linked polyubiquitin chains. This type of polyubiquitination does not lead to protein degradation by the proteasome. Mediates transcriptional activation of target genes. Plays a role in the control of progress through the cell cycle and differentiation. Plays a role in the error-free DNA repair pathway and contributes to the survival of cells after

DNA damage. Acts together with the E3 ligases, HLTF and SHPRH, in the 'Lys-63'-linked poly- ubiquitination of PCNA upon genotoxic stress, which is required for DNA repair. Appears to act together with E3 ligase RNF5 in the 'Lys-63'- linked polyubiquitination of JKAMP thereby regulating JKAMP function by decreasing its association with components of the proteasome and ERAD. Promotes TRIM5 capsid-specific restriction activity and the UBE2V1- UBE2N heterodimer acts in concert with TRIM5 to generate 'Lys-63'-linked polyubiquitin chains which activate the MAP3K7/TAK1 complex which in turn results in the induction and expression of NF-kappa-B and MAPK-responsive inflammatory genes. Together with RNF135 and UB2V1, catalyzes the viral RNA-dependent 'Lys-63'-linked polyubiquitination of RIGI to activate the downstream signaling pathway that leads to interferon beta production (PubMed:28469175, PubMed:31006531). UBE2V1- UBE2N together with TRAF3IP2 E3 ubiquitin ligase mediate 'Lys-63'- linked polyubiquitination of TRAF6, a component of IL17A-mediated signaling pathway.

Cellular Location Nucleus. Cytoplasm

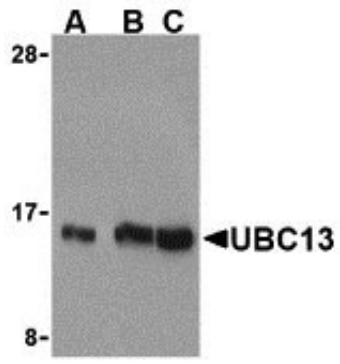
Background

UBC13 Antibody: Ubiquitin-conjugating enzyme 13 (Ubc13) was initially discovered in S. cerevisiae as a DNA-damage inducible protein involved in the error-free DNA postreplication repair pathway. It has recently been shown to be an important component of the Toll-like receptor and IL-1R signaling pathway. Signals from these pathways are relayed by a number of downstream molecules such as MyD88 and tumor necrosis factor receptor associated factor (TRAF6), ultimately activating various kinases and transcription factors. Ubc13 is part of a dimeric ubiquitin-conjugating enzyme complex also containing UEV1A (ubiquitin-conjugating enzyme E2 variant 1) that together with TRAF6 activates TAK1, a member of the mitogen-activated protein kinase kinase kinase family. The Ubc13-UEV1A complex also mediates the Lys-63 ubiquitination of TRAF-6, and this ubiquitination is essential for TAK1 activation.

References

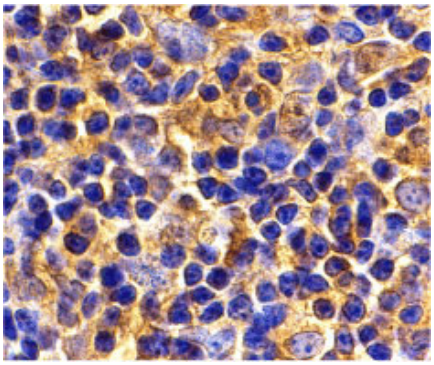
Brusky J, Zhu Y, and Xiao W. UBC13, a DNA-damage-inducible gene, is a member of the error-free postreplication repair pathway in Saccharomyces cerevisiae. Curr. Genet. 2000; 37:168-74.
Akira S and Takeda K. Toll-like receptor Signalling. Nat. Rev. Immunol. 2004; 4:499-511.
Vogel SN, Fitzgerald KA, and Fenton MJ. TLRs: differential adapter utilization by toll-like receptors mediates TLR-specific patterns of gene expression. Mol. Interv. 2003; 3:466-77.
Deng L, Wang C, Spencer E, et al. Activation of the IκB kinase complex by TRAF6 requires a dimeric ubiquitin-conjugating enzyme complex and a unique polyubiquitin chain. Cell 2000; 103:351-61.

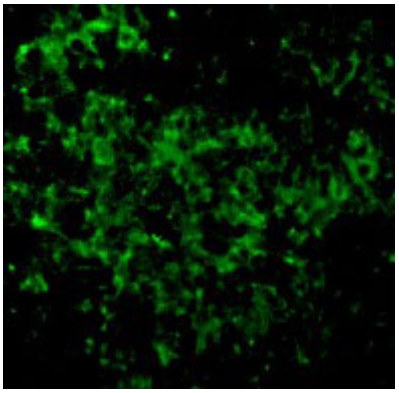
Images



Western blot analysis of UBC13 in human small intestine cell lysates with UBC13 antibody at (A) 0.5, (B) 1, and (C) 2 µg/mL.

Immunohistochemistry of UBC13 in mouse thymus tissue with UBC13 antibody at 2 µg/mL.





Immunofluorescence of UBC13 in Mouse Thymus cells with UBC13 antibody at 10 µg/mL.