10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

USP15 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP14352a

Specification

USP15 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q9Y4E8

USP15 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 9958

Other Names
Ubiquitin carboxyl-terminal hydrolase 15, Deubiquitinating enzyme 15, Ubiquitin thioesterase 15, Ubiquitin-specific-processing protease 15, Unph-2, Unph4, USP15, KIAA0529

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

USP15 Antibody (N-term) Blocking Peptide - Protein Information

Name USP15 {ECO:0000303|PubMed:10444327, ECO:0000312|HGNC:HGNC:12613}

Function
Hydrolase that removes conjugated ubiquitin from target proteins and regulates various pathways such as the TGF-beta receptor signaling, NF-kappa-B and RNF41/NRDP1-PRKN pathways (PubMed:21947082, PubMed:22344298, PubMed:24852371, PubMed:16005295, PubMed:17318178, PubMed:19826004, PubMed:19576224). Acts as a key regulator of TGF-beta receptor signaling pathway, but the precise mechanism is still unclear: according to a report, acts by promoting deubiquitination of monoubiquitinated R-SMADs (SMAD1, SMAD2 and/or SMAD3), thereby alleviating inhibition of R-SMADs and promoting activation of TGF-beta target genes (PubMed:21947082). According to another reports, regulates the TGF-beta receptor signaling pathway by mediating deubiquitination and stabilization of TGFBR1, leading to an enhanced TGF-beta signal (PubMed:22344298). Able to mediate deubiquitination of monoubiquitinated

substrates, 'Lys-27'-, 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains (PubMed:33093067). May also regulate gene expression and/or DNA repair through the deubiquitination of histone H2B (PubMed:24526689). Acts as an inhibitor of mitophagy by counteracting the action of parkin (PRKN): hydrolyzes cleavage of 'Lys- 48'- and 'Lys-63'-linked polyubiquitin chains attached by parkin on target proteins such as MFN2, thereby reducing parkin's ability to drive mitophagy (PubMed:24852371). Acts as an associated component of COP9 signalosome complex (CSN) and regulates different pathways via this association: regulates NF-kappa-B by mediating deubiquitination of NFKBIA and deubiquitinates substrates bound to VCP (PubMed:16005295, PubMed:17318178, PubMed:19826004, PubMed:19576224). Involved in endosome organization by mediating deubiquitination of SQSTM1: ubiquitinated SQSTM1 forms a molecular bridge that restrains cognate vesicles in the perinuclear region and its deubiquitination releases target vesicles for fast transport into the cell periphery (PubMed:27368102). Acts as a negative regulator of antifungal immunity by mediating 'Lys-27'-linked deubiquitination of CARD9, thereby inactivating CARD9 (PubMed:33093067).

Cellular Location
Cytoplasm. Nucleus. Mitochondrion

Tissue Location
Expressed in skeletal muscle, kidney, heart, placenta, liver, thymus, lung, and ovary, with little or no expression in other tissues

USP15 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

USP15 Antibody (N-term) Blocking Peptide - Images

USP15 Antibody (N-term) Blocking Peptide - Background

Ubiquitin (MIM 191339), a highly conserved proteininvolved in the regulation of intracellular protein breakdown, cellcycle regulation, and stress response, is released from degradedproteins by disassembly of the polyubiquitin chains. Thedisassembly process is mediated by ubiquitin-specific proteases(USPs). Also see USP1 (MIM 603478).

USP15 Antibody (N-term) Blocking Peptide - References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Vos, R.M., et al. J. Virol. 83(17):8885-8892(2009)Huang, X., et al. J. Mol. Biol. 391(4):691-702(2009)Ewing, R.M., et al. Mol. Syst. Biol. 3, 89 (2007) :Beausoleil, S.A., et al. Nat. Biotechnol. 24(10):1285-1292(2006)