

Active Recombinant Full Length Human ubiquitin specific peptidase 5 Protein, His Tagged

Cat. No. USP5-12HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length human USP5 was expressed in E. coli cells using an N-terminal His tag.
Species	Human
Source	E.coli
ProteinLength	1-858aa
Description	Ubiquitin carboxyl-terminal hydrolase 5, also known as Deubiquitinating enzyme 5, Isopeptidase T, Ubiquitin thiolesterase 5, Ubiquitin-specific-processing protease 5, ISOT and USP5, is a member of the peptidase C19 family. USP5 contains 2 UBA domains and one UBP-type zinc finger. The UBP-type zinc finger domain interacts selectively with an unmodified C-terminus of the proximal ubiquitin. Both UBA domains are involved in polyubiquitin recognition. The UBP-type zinc finger domain crystallizes as a dimer linked by a disulfide bond between the Cys-195 residues of both molecules, but there is no evidence that the full-length USP5 exists as a dimer. USP5 cleaves linear and branched multiubiquitin polymers with a marked preference for branched polymers. USP5 is involved in unanchored "Lys-48"-linked polyubiquitin disassembly. It binds linear and "Lys-63"-linked polyubiquitin with a lower affinity. Knock-down of USP5 causes the accumulation of p53/TP53 and an increase in p53/TP53 transcriptional activity because the unanchored polyubiquitin that accumulates is able to compete with ubiquitinated p53/TP53 but not with MDM2 for

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	proteasomal recognition.
Tag	N-His
Molecular Mass	98 kDa
Applications	WB,Activity Assay
Stability	Store product at –70 centigrade. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Storage Buffer	Supplied as sterile 50 mM sodium phosphate, pH 7.5, 300mM NaCl, 50-200mM imidazole, 0-0.1mM PMSF, 0.2-1.0mM DTT, 10-25% glycerol
Shipping	Enzymes are highly recommended to be shipped at frozen temperature with dry ice. Shipment made at ambient temperature may seriously affect the activity of the ordered products.
References	1. Reyes-Turcu F.E., et al., 2006, Cell 124:1197-1208. 2. Reyes-Turcu F.E., et al., 2008, J. Biol. Chem. 283:19581-19592. 3. Dayal S., et al., 2009, J. Biol. Chem. 284:5030-5041. 4. Burkard T.R., et al., 2011, BMC Syst. Biol. 5:17-17.

GENE INFORMATION

Gene Name	USP5 ubiquitin specific peptidase 5 [Homo sapiens (human)]
Official Symbol	USP5
Synonyms	USP5; ubiquitin specific peptidase 5 (isopeptidase T); ubiquitin specific protease 5

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(isopeptidase T); ubiquitin carboxyl-terminal hydrolase 5; IsoT; isopeptidase T; ubiquitin isopeptidase T; ubiquitin thioesterase 5; deubiquitinating enzyme 5; ubiquitin thioesterase 5; ubiquitin-specific-processing protease 5; ubiquitin-specific protease-5 (ubiquitin isopeptidase T); ISOT;

Gene ID	8078
mRNA Refseq	NM_001098536
Protein Refseq	NP_001092006
MIM	601447
UniProt ID	P45974

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