Datasheet for ABIN7555927

USP7 Protein (AA 1-1102) (His tag)

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Overview

Quantity:	1 mg
Target:	USP7
Protein Characteristics:	AA 1-1102
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This USP7 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant USP7 Protein expressed in mammalian cells.
Sequence:	MNHQQQQQQQ KAGEQQLSEP EDMEMEAGDT DDPPRITQNP VINGNVALSD GHNTAEEDME DDTSWRSEAT FQFTVERFSR LSESVLSPPC FVRNLPWKIM VMPRFYPDRP HQKSVGFFLQ CNAESDSTSW SCHAQAVLKI INYRDDEKSF SRRISHLFFH KENDWGFSNF MAWSEVTDPE KGFIDDDKVT FEVFVQADAP HGVAWDSKKH TGYVGLKNQG ATCYMNSLLQ TLFFTNQLRK AVYMMPTEGD DSSKSVPLAL QRVFYELQHS DKPVGTKKLT KSFGWETLDS FMQHDVQELC RVLLDNVENK MKGTCVEGTI PKLFRGKMVS YIQCKEVDYR SDRREDYYDI QLSIKGKKNI FESFVDYVAV EQLDGDNKYD AGEHGLQEAE KGVKFLTLPP VLHLQLMRFM YDPQTDQNIK INDRFEFPEQ LPLDEFLQKT DPKDPANYIL HAVLVHSGDN HGGHYVVYLN PKGDGKWCKF DDDVVSRCTK EEAIEHNYGG HDDDLSVRHC TNAYMLVYIR ESKLSEVLQA VTDHDIPQQL VERLQEEKRI EAQKRKERQE AHLYMQVQIV AEDQFCGHQG NDMYDEEKVK YTVFKVLKNS SLAEFVQSLS QTMGFPQDQI RLWPMQARSN GTKRPAMLDN EADGNKTMIE LSDNENPWTI FLETVDPELA ASGATLPKFD KDHDVMLFLK MYDPKTRSLN YCGHIYTPIS CKIRDLLPVM

Product Details

	CDRAGFIQDT SLILYEEVKP NLTERIQDYD VSLDKALDEL MDGDIIVFQK DDPENDNSEL PTAKEYFRDL YHRVDVIFCD KTIPNDPGFV VTLSNRMNYF QVAKTVAQRL NTDPMLLQFF KSQGYRDGPG NPLRHNYEGT LRDLLQFFKP RQPKKLYYQQ LKMKITDFEN RRSFKCIWLN SQFREEEITL YPDKHGCVRD LLEECKKAVE LGEKASGKLR LLEIVSYKII GVHQEDELLE CLSPATSRTF RIEEIPLDQV DIDKENEMLV TVAHFHKEVF GTFGIPFLLR IHQGEHFREV MKRIQSLLDI QEKEFEKFKF AIVMMGRHQY INEDEYEVNL KDFEPQPGNM SHPRPWLGLD HFNKAPKRSR YTYLEKAIKI HN **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	USP7
Alternative Name:	USP7 (USP7 Products)
Background:	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.4.19.12) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (Ubiquitin thioesterase 7) (Ubiquitin-

specific-processing protease 7),FUNCTION: Hydrolase that deubiquitinates target proteins such as FOXO4, DEPTOR, KAT5, p53/TP53, MDM2, ERCC6, DNMT1, UHRF1, PTEN, KMT2E/MLL5 and DAXX (PubMed:11923872, PubMed:15053880, PubMed:16964248, PubMed:18716620, PubMed:25283148, PubMed:25865756, PubMed:26678539, PubMed:28655758, PubMed:35216969). Together with DAXX, prevents MDM2 self-ubiquitination and enhances the E3 ligase activity of MDM2 towards p53/TP53, thereby promoting p53/TP53 ubiquitination and proteasomal degradation (PubMed:15053880, PubMed:16845383, PubMed:18566590, PubMed:20153724). Deubiquitinates p53/TP53, preventing degradation of p53/TP53, and enhances p53/TP53-dependent transcription regulation, cell growth repression and apoptosis (PubMed:25283148). Deubiquitinates p53/TP53 and MDM2 and strongly stabilizes p53/TP53 even in the presence of excess MDM2, and also induces p53/TP53-dependent cell growth repression and apoptosis (PubMed:11923872, PubMed:26786098). Deubiquitination of FOXO4 in presence of hydrogen peroxide is not dependent on p53/TP53 and inhibits FOXO4-induced transcriptional activity (PubMed:16964248). In association with DAXX, is involved in the deubiquitination and translocation of PTEN from the nucleus to the cytoplasm, both processes that are counteracted by PML (PubMed:18716620). Deubiquitinates KMT2E/MLL5 preventing KMT2E/MLL5 proteasomal-mediated degradation (PubMed:26678539). Involved in cell proliferation during early embryonic development. Involved in transcription-coupled nucleotide excision repair (TC-NER) in response to UV damage: recruited to DNA damage sites following interaction with KIAA1530/UVSSA and promotes deubiquitination of ERCC6, preventing UV-induced degradation of ERCC6 (PubMed:22466611, PubMed:22466612). Involved in maintenance of DNA methylation via its interaction with UHRF1 and DNMT1: acts by mediating deubiquitination of UHRF1 and DNMT1, preventing their degradation and promoting DNA methylation by DNMT1 (PubMed:21745816, PubMed:22411829). Deubiquitinates alkylation repair enzyme ALKBH3. OTUD4 recruits USP7 and USP9X to stabilize ALKBH3, thereby promoting the repair of alkylated DNA lesions (PubMed:25944111). Acts as a chromatin regulator via its association with the Polycomb group (PcG) multiprotein PRC1-like complex, may act by deubiquitinating components of the PRC1-like complex (PubMed:20601937). Able to mediate deubiquitination of histone H2B, it is however unsure whether this activity takes place in vivo (PubMed:20601937). Exhibits a preference towards 'Lys-48'-linked ubiquitin chains (PubMed:22689415). Increases regulatory T-cells (Treg) suppressive capacity by deubiquitinating and stabilizing the transcription factor FOXP3 which is crucial for Treg cell function (PubMed:23973222). Plays a role in the maintenance of the circadian clock periodicity via deubiquitination and stabilization of the CRY1 and CRY2 proteins (PubMed:27123980). Deubiquitinates REST, thereby stabilizing REST and promoting the maintenance of neural progenitor cells (PubMed:21258371). Deubiquitinates SIRT7, inhibiting SIRT7 histone

Target Details

	deacetylase activity and regulating gluconeogenesis (PubMed:28655758). Involved in the regulation of WASH-dependent actin polymerization at the surface of endosomes and the regulation of endosomal protein recycling (PubMed:26365382). It maintains optimal WASH complex activity and precise F-actin levels via deubiquitination of TRIM27 and WASHC1 (PubMed:26365382). Mediates the deubiquitination of phosphorylated DEPTOR, promoting its stability and leading to decreased mTORC1 signaling (PubMed:35216969). {ECO:0000269|PubMed:11923872, ECO:0000269|PubMed:15053880, ECO:0000269|PubMed:16845383, ECO:0000269|PubMed:16964248, ECO:0000269|PubMed:18566590, ECO:0000269|PubMed:18716620, ECO:0000269|PubMed:20153724, ECO:0000269|PubMed:20601937, ECO:0000269|PubMed:21258371, ECO:0000269|PubMed:21745816, ECO:0000269|PubMed:22411829, ECO:0000269|PubMed:22466611, ECO:0000269|PubMed:22466612, ECO:0000269|PubMed:22689415, ECO:0000269|PubMed:23973222, ECO:0000269|PubMed:25283148, ECO:0000269|PubMed:25865756, ECO:0000269|PubMed:25944111, ECO:0000269|PubMed:26365382, ECO:0000269|PubMed:26678539, ECO:0000269|PubMed:26786098, ECO:0000269|PubMed:27123980, ECO:0000269|PubMed:28655758, ECO:0000269|PubMed:35216969}., FUNCTION: (Microbial infection) Contributes to the overall stabilization and trans-activation capability of the herpesvirus 1 trans-acting transcriptional protein ICP0/VMW110 during HSV-1 infection. {ECO:0000269|PubMed:14506283, ECO:0000269|PubMed:16160161, ECO:0000269|PubMed:18590780}., FUNCTION: (Microbial infection) Upon infection with Epstein-Barr virus, the interaction with viral EBNA1 increases the association of USP7 with PML proteins, which is required for the polyubiquitylation and degradation of PML. {ECO:0000269|PubMed:20719947, ECO:0000269|PubMed:24216761}.
Molecular Weight:	128.3 kDa
UniProt:	Q93009

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months