UBE2M Recombinant Protein

PRODUCT OVERVIEW

Product Name	UBE2M, Recombinant Protein
Full Product Name	UBE2M Protein, Human, Recombinant
Product Gene Name	UBE2M recombinant protein
Product Synonym Names	Human UBE2M Protein; hUbc12 Protein, Human; UBC-RS2 Protein, Human; UBC12 Protein, Human; ubiquitin-conjugating enzyme E2M
Sequence	Met1-Lys18 3
Host	E Coli
Form/Format	Lyophilized from sterile PBS, 10% glycerol, 1mM DTT, pH8.0. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Purity/Purification	>90% as determined by SDS-PAGE
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.
Molecular Weight	20,900 Da
OMIM	603173
3D Structure	ModBase 3D Structure for P61081
Species	Human
Predicted N Terminal	Gly
Tag	N-cleavage
Protein Construction	A DNA sequence encoding the human UBE2M (P61081)(Met 1-Lys 183) was expressed and purified, with additional two amino acids (Gly & Pro) at the N-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Related Product Information for UBE2M recombinant protein	Background: UBE2M is a member of the ubiquitin-conjugating E2 family whose members perform the second step in the ubiquitination reaction. Initially identified as the main process for protein degradation, ubiquitination is believed nowadays to be crucial for a wider range of cellular processes. The outcome of the ubiquitin-conjugation reaction, and thereby the fate of the substrate, is heavily dependent on the number of ubiquitin molecules attached and how these ubiquitin molecules are inter-connected. To deal with this complexity and to allow adequate ubiquitination in time and space, a highly sophisticated conjugation machinery has been developed. In a sequential manner, ubiquitin becomes activated by an ubiquitin-activating enzyme (E1), which then transfers the ubiquitin to a group of ubiquitin-conjugating enzymes (E2s). Next, ubiquitin-loaded E2s are interacting with ubiquitin-protein ligases (E3s) and ubiquitin is conjugated to substrates on recruitment by the E3. These three key enzymes are operating in a hierarchical system, wherein two E1s and 35 E2s have been found and hundreds of E3s have been identified in humans.
Product References and Citations for UBE2M recombinant protein	Sjoerd J L van Wijk, et al. (2009) A comprehensive framework of E2-RING E3 interactions of the human ubiquitin-proteasome system. Mol Syst Biol. 5: 317.Nandi D, et al. (2006) The ubiquitin-proteasome system. Journal of biosciences. 31 (1): 137-55.

Other Notes	Small volumes of UBE2M recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for UBE2M purchase	MBS8121327 is a recombinant protein targeting UBE2M. Also known as UBE2M Protein, Human, Recombinant. Host: E Coli.



SDS-Page of UBE2M recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for UBE2M. It may not necessarily be applicable to this product.

NCBI GI #	4507791
NCBI GeneID	9040
NCBI Accession #	NP_003960.1
UniProt Primary Accession #	P61081
UniProt Secondary Accession #	O76069; Q8VC50
UniProt Related Accession #	P61081
GenBank Nucleotide #	NM_003969.3
NCBI Official Full Name	NEDD8-conjugating enzyme Ubc12
NCBI Official Synonym Full Names	ubiquitin-conjugating enzyme E2M
NCBI Official Symbol	UBE2M
NCBI Official Synonym Symbols	UBC12; hUbc12; UBC-RS2
UniProt Protein Name	NEDD8-conjugating enzyme Ubc12
UniProt Synonym Protein Names	NEDD8 carrier protein; NEDD8 protein ligase; Ubiquitin-conjugating enzyme E2 M
UniProt Gene Name	UBE2M
UniProt Synonym Gene Names	UBC12
UniProt Entry Name	UBC12_HUMAN
NCBI Protein Information	NEDD8-conjugating enzyme Ubc12; NEDD8 carrier protein; NEDD8 protein ligase; ubiquitin carrier protein M; ubiquitin-conjugating enzyme E2M (UBC12 homolog, yeast); ubiquitin-protein ligase M; yeast UBC12 homolog
NCBI Summary for UBE2M	The modification of proteins with ubiquitin is an important cellular mechanism for targeting abnormal or short-lived proteins for degradation. Ubiquitination involves at least three classes of enzymes: ubiquitin-activating enzymes, or E1s, ubiquitin-conjugating enzymes, or E2s, and ubiquitin-protein ligases, or E3s. This gene encodes a member of the E2 ubiquitin-conjugating enzyme family. The encoded protein is linked with a ubiquitin-like protein, NEDD8, which can be conjugated to cellular proteins, such as Cdc53/culin. [provided by RefSeq, Jul 2008]

UniProt Comments for UBE2M	UBE2M: Accepts the ubiquitin-like protein NEDD8 from the UBA3- NAE1 E1 complex and catalyzes its covalent attachment to other proteins. The specific interaction with the E3 ubiquitin ligase RBX1, but not RBX2, suggests that the RBX1-UBE2M complex neddylates specific target proteins, such as CUL1, CUL2, CUL3 and CUL4. Involved in cell proliferation. Interacts with UBA3, DCUN1D1 and RBX1. Belongs to the ubiquitin-conjugating enzyme family. UBC12 subfamily. Protein type: Ubiquitin ligase; Ligase; Adaptor/scaffold; Ubiquitin conjugating system; EC 6.3.2.19; EC 6.3.2.- Chromosomal Location of Human Ortholog: 19q13.43 Cellular Component: cytoplasm; cytosol Molecular Function: protein binding; ubiquitin protein ligase binding; ubiquitin-protein ligase activity; ribosomal S6-glutamic acid ligase activity; ATP binding; NEDD8 ligase activity Biological Process: protein neddylation; positive regulation of neuron apoptosis; transforming growth factor beta receptor signaling pathway; protein modification process; protein ubiquitination
Research Articles on UBE2M	**1.** Distinct preferences of UBC12 and UBE2F peptides for inhibiting different DCNLs, including the oncogenic DCNL1.
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