

# Recombinant Human Ubiquitin-Conjugating Enzyme E2M, His-tagged

**Cat. No.** UBE2M-1501H    **Lot. No.** (See product label)

## SPECIFICATION

**Product Overview**      Ubiquitin Conjugating Enzyme E2M Human Recombinant produced in E.coli is a 25 kDa protein containing 216 amino acids. The UBE2M protein contains 6xHis tag and is purified by proprietary chromatographic techniques.

**Species**      Human

**Source**      Human

**Description**      Ubch12 is functional in in vitro NEDDylation reactions. It has been shown to form a thioester linkage with NEDD8 in the presence of the NEDD8 activating enzyme complex Uba3/APP-BP1. APP-BP1 binds to the amyloid precursor protein (APP) carboxy terminal domain and is important in conjunction with Uba3 and Ubch12 in driving cells through the S to M checkpoint. It was demonstrated to be the E2 responsible for the NEDDylation of the Cul-1 component of the SCF (??-TRCP) complex which is important as the E3-ligase in the ubiquitinylation of I?B?. NEDDylation of Cul-1 is essential for conjugation and processing of NF-?B p105 by SCF (??-TRCP) following phosphorylation of the complex. A dominant negative form of Ubch12, previously demonstrated to sequester NEDD8 and inhibit its conjugation, inhibits both conjugation and processing of p105, which is alleviated by wild-type Ubch12.

**Form**      Lyophilized from a 0.2 µm filtered concentrated (1 mg/ml) solution in 1X PBS and 1 mM DTT, pH 7.5.

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<b>Purity</b>	Greater than 95.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
<b>Physical Appearance</b>	Sterile Filtered white lyophilized powder.
<b>Solubility</b>	It is recommended to reconstitute the lyophilized UBE2M in sterile water not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
<b>Amino acid sequence</b>	MSYYHHHHHHHDYDIPTTENLYFQGAMDPEFRIWMIKLFSLKQQKKEEE SAGGTKGS SKKASAAQLRIQKDINELNLPKTCDISFSDPDDLNFKLVIC PDEGFYKSGKFVFSFK VGQGYPHDPPKVKCETMVYHPNIDLEGNVCLN ILREDWKPVLINSIYGLQYLFLEP NPEDPLNKEAVLQNNRRLFEQNVQ RSMRGGYIGSTYFERCLK
<b>Storage</b>	Lyophilized UBE2M although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution UBE2M should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

## GENE INFORMATION

<b>Gene Name</b>	<a href="#">UBE2M ubiquitin-conjugating enzyme E2M [ Homo sapiens ]</a>
<b>Official Symbol</b>	<a href="#">UBE2M</a>
<b>Synonyms</b>	UBE2M; ubiquitin-conjugating enzyme E2M; UBC12; hUbc12; UBC-RS2; NEDD8-conjugating enzyme Ubc12 yeast UBC12 homolog; NEDD8 protein ligase; NEDD8 carrier protein; ubiquitin-protein ligase M; ubiquitin carrier protein M; ubiquitin-conjugating enzyme E2M (UBC12 homolog, yeast)
<b>Gene ID</b>	<a href="#">9040</a>

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<b>mRNA Refseq</b>	NM_003969
<b>Protein Refseq</b>	NP_003960
<b>MIM</b>	603173
<b>UniProt ID</b>	P61081
<b>Chromosome Location</b>	19q13.43
<b>Pathway</b>	Adaptive Immunity Signaling; Antigen processing: Ubiquitination & Proteasome degradation; Class I MHC mediated antigen processing & presentation; Immune System; Ubiquitin mediated proteolysis
<b>Function</b>	ATP binding; NEDD8 ligase activity; acid-amino acid ligase activity; ligase activity; nucleotide binding; protein binding; ribosomal S6-glutamic acid ligase activity; ubiquitin-protein ligase activity

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