

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 (β -TRCP) complex which is important as the E3-ligase in the ubiquitinylation of I β B β . NEDDylation of Cul-1 is essential for conjugation and processing of NF- κ B p105 by SCF (β -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 μ m filtered concentrated (1 mg/ml) solution in 1X PBS and 1 mM DTT, pH 7.5.

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Purity	Greater than 95.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Physical Appearance	Sterile Filtered white lyophilized powder.
Solubility	It is recommended to reconstitute the lyophilized UBE2M in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Amino acid sequence	MSYYHHHHHHHDYDIPTTENLYFQGAMDPEFRIWMIKLFSLKQKQKKEEE SAGGTKGS SKKASAAQLRIQKDINELNLPKTCDISFSDPDDLNFKLVIC PDEGFYKSGKFVFSFK VGQGYPHDPPKVKCETMVYHPNIDLEGNVCLN ILREDWKPVLTIINSIYGLQYLFLEP NPEDPLNKEAVLQNNRRLFEQNVQ RSMRGGYIGSTYFERCLK
Storage	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

Gene Name	UBE2M ubiquitin-conjugating enzyme E2M [Homo sapiens]
Official Symbol	UBE2M
Synonyms	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)
Gene ID	9040

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mRNA Refseq	NM_003969
Protein Refseq	NP_003960
MIM	603173
UniProt ID	P61081
Chromosome Location	19q13.43
Pathway	Adaptive Immunity Signaling; Antigen processing: Ubiquitination & Proteasome degradation; Class I MHC mediated antigen processing & presentation; Immune System; Ubiquitin mediated proteolysis
Function	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
Protein UBE2M PDB1y8x	