

Recombinant Human Ubiquitin Conjugating Enzyme 12, His6-Tagged

Cat. No. UBE2M-05H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Ubiquitin Conjugating Enzyme 12 produced in <i>E.coli</i> is a single non-glycosylated polypeptide chain containing 216 amino acids and having a molecular mass of approximately 25 kDa.
Species	Human
Source	<i>E.coli</i>
Description	Ubch12 is functional in <i>in vitro</i> 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 IκBα. NEDDylation of Cul-1 is essential for conjugation and processing of NF-κB 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.
Purity	>95% by SDS-PAGE and HPLC analyses.

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Formulation	Lyophilized from a 0.2µm filtered concentrated (1mg/ml) solution in 1×PBS, 1mM DTT, pH 7.5.
Endotoxin	Less than 1EU/µg of rHuUbcH12 as determined by LAL method.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at <-20°C. Further dilutions should be made in appropriate buffered solutions.
Storage	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

GENE INFORMATION

Gene Name	UBE2M
Synonyms	UBC12; hUbc12; UBC-RS2 ubiquitin-conjugating enzyme E2M(UBC12 homolog, yeast); ubiquitin-conjugating enzyme E2M(homologous to yeast UBC12); UBC12_HUMAN; UBE2M; NEDD8-conjugating enzyme Ubc12; EC6.3.2.-; NEDD8 protein ligase; NEDD8 carrier protein; ubiquitin carrier protein M; ubiquitin-conjugating enzyme E2M(UBC12 homolog, yeast); ubiquitin-conjugating enzyme E2M(homologous to yeast UBC12); ubiquitin-protein ligase M; yeast UBC12 homolog.
Gene ID	9040

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mRNA Refseq	NM_003969
Protein Refseq	NP_003960
MIM	603173
UniProt ID	P61081
Chromosome Location	19q13.43
Function	ligase activity;protein binding;ribosomal S6-glutamic acid ligase activity; ubiquitin-protein ligase activity; ubiquitin-protein ligase activity.
PDBrendering based on 1y8x. Available structures:1y8x,2nvu	