



## Product Datasheet

<b>Product Name</b>	Ubiquitin Conjugating Enzyme E2M Human Recombinant
<b>Cata No</b>	CB500521
<b>Source</b>	<i>Escherichia Coli.</i>
<b>Synonyms</b>	NEDD8-conjugating enzyme Ubc12, Ubiquitin-conjugating enzyme E2 M, NEDD8 protein ligase, NEDD8 carrier protein, UBC12, hUbc12, UBC-RS2.

### 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 ( $\beta$ -TRCP) complex which is important as the E3-ligase in the ubiquitinylation of I $\kappa$ B $\alpha$ . NEDDylation of Cul-1 is essential for conjugation and processing of NF- $\kappa$ B p105 by SCF ( $\beta$ -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.

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.

### Physical Appearance

Sterile Filtered white lyophilized powder.

### Purity

Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

### Formulation

Lyophilized from a 0.2 $\mu$ m filtered concentrated (1 mg/ml) solution in 1X PBS and 1mM DTT, pH 7.5.

### Stability

Lyophilized UBE2M although stable at room temperature for 3 weeks, should be stored desiccated below -18 $^{\circ}$ C. Upon reconstitution UBE2M should be stored at 4 $^{\circ}$ C between 2-7 days and for future use below -18 $^{\circ}$ C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

### Sequence

MSYYHHHHHDYDIPTTENLYFQGAMDPEFRIW  
MIKLFSLKQQKKEEE  
SAGGTGSSKASAAQLRIQKDINELNLPKTCDIS  
FSDPDDLNFKLVIC  
PDEGFYKSGKFVFSFKVGGYPHPPKVKCETM  
VYHPNIDLEGNVCLN  
ILREDWKPVLINSIIYGLQYLFLEPNPEDPLNKEA  
VLQNNRRLFQNVQ  
RSMRGGYIGSTYFERCLK.