

Product Data Sheet

□ Cat # RP-426

Recombinant Human Ubiquitin Conjugating enzyme 12

Size: □ 10 ug

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 κ B α . 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.

Source: *Escherichia Coli*. Ubiquitin Conjugating Enzyme 12 Human Recombinant produced in E.coli is a 25 kDa protein containing 216 amino acids. The Ubc12 protein contains 6xHis tag and is purified by proprietary chromatographic techniques. Lyophilized from a 0.2 μ m filtered concentrated (1 mg/ml) solution in 1X PBS and 1mM DTT, pH 7.5.

Applications and Suggested Dilutions: It is recommended to reconstitute the lyophilized Ubc12 in sterile water not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions. Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE. Users must optimize the appropriate concentration and conditions for each assay.

Storage and Stability: Lyophilized Ubc12 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Ubc12 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.** If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4oC for ~1 week or aliquots in suitable size and store at -20oC for long term storage.

Usage: This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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