UbcH3 (human), (recombinant) (His-tag)

Ubiquitinylation of proteins constitutes an important cellular mechanism for targeting short-lived proteins for degradation by the 26S proteasome. Three classes of enzymes are involved in the conjugation of ubiquitin to proteins. E1, the ubiquitin activating enzyme, activates ubiquitin through the ATP-dependent formation of a high-energy thiol ester bond between the carboxyl terminus of ubiquitin and the active-site cysteine within E1. This E1-activated ubiquitin is transferred to a cysteine residue of an E2, or ubiquitin-conjugating enzyme (UbC). E2 enzymes, either by themselves or in conjunction with E3 enzymes (ubiquitin ligases), then transfer ubiquitin to target proteins forming stable isopeptide bonds resulting in multi-ubiquitin chain formation. It is the diverse combinations of E2-E3 complexes which are thought to define substrate specificity.

UbcH3 is a class II enzyme, homologous to Cdc34 from *Saccharomyces cerevisiae,* and is important in the control of cell cycle and DNA replication. UbcH3/Cdc34 in association with different E3 complexes, including SCF, has been shown to target many different substrates for ubiquitination and degradation during cell division, signal transduction, and development. UbcH3 substrates that have been characterized include IκB, Wee1, ICERIIγ, p27Xic1. Additionally, substrates such as β-catenin, p21, and is phosphorylated and ubiquitinylated *in vivo*.

Ordering Information

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BML-UW8730-0100	100µg

Manuals, SDS & CofA

View Online »

Handling & Storage

Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Application Notes	Useful for *in vitro* ubiquitinylation reactions.
Formulation	Liquid. In 50 mM HEPES, pH 8.0, containing 50 mM NaCl, 1 mM DTT, and 10% glycerol.
MW	~32kDa
Purity	≥95% (SDS-PAGE)
Source	Produced in *E. coli.*
UniProt ID	P49427

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