BostonBiochem®

An R&D Systems Company

MATERIAL DATA SHEET

Recombinant Human His6 UbcH3
Cat. # E2-610

Ubiquitin-conjugating Enzyme H3 (UbcH3), also known as Cell Division Cycle 34 (Cdc34), is a member of the Ubiquitin-conjugating (E2) enzyme family (1). UbcH3 has a predicted molecular weight of 26 kDa. The human protein shares 98% amino acid (aa) sequence identity with the mouse and rat orthologs. In addition to an E2 catalytic core domain, UbcH3 has two Ubiquitin binding sites, UBS1, from aa 205-215, and UBS2, from aa 216-225, and a C-terminal acidic tail domain (2,3). UbcH3 is required for efficient cell cycle progression in human cells (4). UbcH3 interacts with the SCF(Fbw7) and SCF(Skp2) Ubiquitin ligases (E3s) to target the key cell cycle proteins Myc and p27/Kip1, respectively, for ubiquitination and degradation (4,5). Furthermore, CK2 has been shown to phosphorylate human UbcH3 on Ser203, Ser222, and Ser231 in cycling cells (6). The proliferation of cancer cell lines is inhibited following treatment with a human UbcH3 inhibitor, suggesting that UbcH3 also plays a significant role in cancer (7). This protein has an N-terminal His_6-tag.

Product Information	
Quantity:	50 µg | 100 µg
MW:	28 kDa
Source:	*E. coli*-derived Contains an N-terminal Met and 6-His tag Accession # P49427
Stock:	X mg/ml (µM) in 50 mM HEPES pH 7.5, 200 mM NaCl, 1 mM TCEP, 10% Glycerol (v/v)
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: Recombinant Human His6-UbcH3/Cdc34 is a member of the Ubiquitin-conjugating (E2) enzyme family that receives Ubiquitin from a Ubiquitin-activating (E1) enzyme and subsequently interacts with a Ubiquitin ligase (E3) to conjugate Ubiquitin to substrate proteins. Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human His6-UbcH3/Cdc34 concentration of 0.1-1 µM.

Storage: **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -70 °C as supplied.
- 3 months, -70 °C under sterile conditions after opening.

Literature

References:

1. Plon, S.E. *et al*. (1993) Proc. Natl. Acad. Sci. USA **90**:10484.
2. Choi, Y.S. *et al*. (2010) J. Biol. Chem. **285**:17754.
3. Block, K. *et al*. (2005) Cell Cycle **4**:1421.
4. Butz, N. *et al*. (2005) Exp. Cell Res. **303**:482.
5. Popov, N. *et al*. (2010) Nat. Cell Biol. **12**:973.
6. Sadowski, M. *et al*. (2007) Biochem. J. **405**:569.
7. Ceccarelli, D.F. *et al*. (2011) Cell **145**:1075.

For research use only. Not for use in humans.