BostonBiochem®

An R&D Systems Company

MATERIAL DATA SHEET

Recombinant Human UbcH7 Dominant Negative
Cat. # E2-642

Ubiquitin-conjugating Enzyme H7 (UbcH7), also known as Ubiquitin-conjugating Enzyme E2L 3 (UBE2L3), is a member of the Ubiquitin-conjugating (E2) enzyme family (1). It has a predicted molecular weight of approximately 18 kDa. The human UbcH7 protein shares 100% amino acid (aa) sequence identity with the mouse and rat orthologs. UbcH7 has an E2 catalytic core domain that contains an active site cysteine residue and comprises 152 of its 154 aa residues. UbcH7 is catalytically active with HECT and RBR domain-containing families of Ubiquitin ligases (E3s) (2,3). UbcH7 localizes to both the nucleus and cytoplasm in human cells. In mice, its ortholog is expressed in many tissues including brain, muscle, heart, lung, lymph node, spleen, thymus, and testis (4,5). UbcH7 depletion results in an extended S phase and a reduced rate of proliferation, suggesting that it may play a role in the cell cycle (6). In humans, single nucleotide polymorphisms in UbcH7 are associated with systemic lupus erythematosus and Crohn's disease, suggesting that UbcH7 is important for proper immune system function (7,8). This enzyme has a mutation of the active site from cysteine to serine which abolishes the ability of UbcH7 to transfer ubiquitin to an accepting E3 protein. This product is ideal for use as a negative control, competitive control, or to study protein-protein interactions.

Product Information	
Quantity:	100 µg
MW:	18 kDa
Source:	*E. coli*-derived Accession # P68036
Stock:	Supplied as a solution in HEPES, NaCl, DTT and Glycerol.
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: The Ubiquitin-conjugating (E2) enzyme family receives Ubiquitin from a Ubiquitin-activating (E1) enzyme and subsequently interacts with a Ubiquitin ligase (E3) to conjugate Ubiquitin to substrate proteins. Recombinant Human UbcH7/UBE2L3 Dominant Negative is catalytically inactive and is ideal for use as a negative control. Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human UbcH7/UBE2L3 Dominant Negative 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. Nuber, U. *et al*. (1996) J. Biol. Chem. **271**:2795.
2. Huang, L. *et al*. (1999) Science **286**:1321.
3. Wenzel, D.M. *et al*. (2011) Nature **474**:105.
4. Garside, H. *et al*. (2006) J. Endocrinol. **190**:621.
5. Harbers, K. *et al*. (1996) Proc. Natl. Acad. Sci. USA **93**:12412.
6. Whitcomb, E.A. *et al*. (2009) Mol. Biol. Cell **20**:1.
7. Wang, S. *et al*. (2012) Genes Immun. **13**:380.
8. Fransen, K. *et al*. (2010) Hum. Mol. Genet. **19**:3482.

For research use only. Not for use in humans.