

MATERIAL DATA SHEET

Recombinant Human UbcH5a/UBE2D1

Cat. # E2-616

Ubiquitin-conjugating Enzyme H5a (UbcH5a), also known as Ubiquitin-conjugating Enzyme E2D 1 (UBE2D1), is a ubiquitously expressed protein that is related to Stimulator of Iron Transport (SFT) (1,2). Human UbcH5a/UBE2D1 has a predicted molecular weight of 17 kDa and shares 89% and 88% amino acid (aa) sequence identity with the related family members UbcH5b and UbcH5c, respectively (3). Human UbcH5a/UBE2D1 shares 100% aa sequence identity with the mouse and rat orthologs. UbcH5a/UBE2D1 has a conserved E2 catalytic core domain that contains an active site cysteine residue, and it interacts with a variety of HECT and RING finger Ubiquitin ligases (E3) to mediate the ubiquitination of specific target proteins (4). UbcH5a/UBE2D1 interacts with the E3, E6-AP, to conjugate Ubiquitin to the tumor suppressor, p53 (1). Additional protein targets of UbcH5a/UBE2D1 include c-Fos, RIP1, and HIF-1 (5,6). Pathologically, UbcH5a/UBE2D1 is implicated in protein degradation during cancer and immune responses (7).

Product Information

Quantity:	50 µg 100 µg
MW:	17 kDa
Source:	<i>E. coli</i> -derived human UbcH5a/UBE2D1 protein Accession # P51668
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 7.5, 200 mM NaCl, 10% (v/v) Glycerol, 1 mM TCEP
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: Recombinant Human UbcH5a/UBE2D1 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 UbcH5a/UBE2D1 concentration of 0.1-1 μ M.

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. Scheffner, M. *et al.* (1994) Proc. Natl. Acad. Sci. USA **91**:8797.
2. Gehrke, S. *et al.* (2003) Blood **101**:3288.
3. Jensen, J. *et al.* (1995) J. Biol. Chem. **270**:30408.
4. Lorick, K. *et al.* (2005) Methods Enzymol. **398**:54.
5. Stancovski, I. *et al.* (1995) Mol. Cell Biol. **15**:7106.
6. Dynek, J. *et al.* (2010) EMBO J. **29**:4128.
7. Vanni, E. *et al.* (2012) J. Virol. **86**:6323.

For research use only. Not for use in humans.