
MATERIAL DATA SHEET

Recombinant Human His6 UBE2G2**Cat. # E2-680**

Ubiquitin-conjugating Enzyme E2G 2 (UBE2G2), also known as Ubiquitin-conjugating Enzyme 7 (Ubc7), is a ubiquitously expressed member of the Ubiquitin-conjugating (E2) enzyme family that localizes to both the nucleus and cytoplasm (1,2). UBE2G2 has a predicted molecular weight of 18 kDa. The human protein shares 100% amino acid sequence identity with the mouse and rat orthologs. UBE2G2 interacts with the HRD1 and gp78 Ubiquitin ligases (E3s) to mediate efficient endoplasmic reticulum-associated degradation (ERAD) of misfolded proteins in human cells (3,4). Mechanistically, it has been shown that UBE2G2 forms Lys48-linked Ubiquitin chains on itself prior to gp78-dependent transfer of the Ubiquitin chains to target proteins (5,6). UBE2G2 also interacts with the CRL4(Cdt2) E3 complex to promote the ubiquitination and degradation of Cdt1 following UV irradiation, suggesting that UBE2G2 may function in the response to DNA damage (7). This protein has an N-terminal His₆-tag. (Accession # NP_003334)

Product Information

Quantity:	50 µg 100 µg
MW:	20 kDa
Source:	<i>E. coli</i> -derived Contains an N-terminal 6-His tag Accession # NP_003334
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 7.5, 100 mM NaCl, 10% Glycerol (v/v), 1 mM TCEP
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: Recombinant Human His6-UBE2G2 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-UBE2G2 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. Katsanis, N. & E.M. Fisher (1998) *Genomics* **51**:128.
2. Napolitano, L.M. *et al.* (2011) *Biochem. J.* **434**:309.
3. Kikkert, M. *et al.* (2004) *J. Biol. Chem.* **279**:3525.
4. Chen, B. *et al.* (2006) *Proc. Natl. Acad. Sci. USA* **103**:341.
5. Li, W. *et al.* (2007) *Nature* **446**:333.
6. Li, W. *et al.* (2009) *Proc. Natl. Acad. Sci. USA* **106**:3722.
7. Shibata, E. *et al.* (2011) *Mol. Cell. Biol.* **31**:3136.

For research use only. Not for use in humans.