

MATERIAL DATA SHEET

His₆-UBE2G2, human recombinant

Cat. # E2-680

Ube2G2 is a Class I E2 enzyme and shares 60% and 100% sequence identity with *S.cerevisiae* Ubc7 and mouse respectively. In yeast, Ubc7 is an endoplasmic reticulum (ER)-bound molecule and the active site faces the cytosol. The Ube2G2 E2 enzyme and the GP78 E3 ligase are active components of ERAD (endoplasmic reticulum-associated degradation) pathway which is essential for the degradation of misfolded ER proteins. The mechanism of K48-linked poly-ubiquitination by Ube2G2/GP78 appears to involve the transfer of preassembled Ub chains from Ube2G2 to lysine residues in a substrate. The E2 and E3 enzymes form a large hetero-oligomer which brings multiple Ube2G2 molecules into close proximity which allows for Ub transfer between neighboring E2s. This Ube2G2 contains an N-terminal His₆-tag. Accession # NP_003334.

Product Information

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| Quantity: | X µg |
| Stock: | X mg/ml (XµM) in 50 mM HEPES pH 8.0, 50 mM NaCl, 10% glycerol, 1 mM DTT. Concentration varies with Lot number. |
| MW: | 20.5 kD |
| Purity: | > 95% by SDS-PAGE |

Use & Storage

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| Use: | Typical enzyme concentration to support conjugation <i>in vitro</i> is 100nM-1 µM depending on conditions. |
| Storage: | Store at -80°C. Avoid multiple freeze/thaw cycles. |

Literature

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| References: | Arai R, <i>et al.</i> (2006) <u>Acta Crystal. (Sect.F Struc. Biol.Cryst. Comm.</u> 62 :330-334 |
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| | Katsanis N, <i>et al.</i> (1998) <u>Genomics</u> 51 :128-131. |
| | Li W, <i>et al.</i> (2007) <u>Nature.</u> 446 :333-337 |
| | Li W, <i>et al.</i> (2008) <u>Proc. Natl. Acad. Sci.</u> 106 :3722-3727 |
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