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MATERIAL DATA SHEET

Recombinant Human His6-Pro UFM1
Cat. # UL-505

Human Ubiquitin-fold Modifier 1 (UFM1), also known as BM-002, is an 85 amino acid (aa) member of the Ubiquitin-like protein family that has a predicted molecular weight of 9.1 kDa. Human and mouse UFM1 share 100% aa sequence identity and are primarily localized in the nucleus, but can also be detected in the cytoplasm and the endoplasmic reticulum (ER) (1). ER localization of UFM1 appears to be dependent on the co-expression of UFBP1 (2). Initially expressed as an inactive precursor, UFM1 undergoes proteolytic cleavage at the C-terminus to expose a conserved glycine residue that is necessary for UFM1 conjugation to target proteins. Conjugation of UFM1 to target proteins requires a UFM1-activating (E1) enzyme, a UFM1-conjugating (E2) enzyme, and a UFM1 ligase (E3) (1,3). UFM1 has been shown to be a mediator of ER stress-induced apoptosis and to promote the pathogenesis of *Leishmania* (2,4). This protein contains an N-terminal His_6-tag.

Product Information	
Quantity:	250 µg
MW:	12 kDa
Source:	*E. coli*-derived human UFM1 protein Contains an N-terminal 6-His tag Accession # NP_057701
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 7.5, 150 mM NaCl, 10% (v/v) Glycerol, 1 mM DTT
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

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Use & Storage

Use: Recombinant Human His6-Pro UFM1 can be used as a negative control reaction for UFMylation reactions, or as a substrate for deUFMylases. Protein concentration for use in vitro will need to be optimized for each specific application.

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. Komatsu, M. *et al*. (2004) EMBO J. **23**:1977.
2. Lemaire, K. *et al*. (2011) PLoS One **6**:e18517.
3. Tatsumi, K. *et al*. (2010) J. Biol. Chem. **285**:5417.
4. Gannavaram, S. *et al*. (2012) Mol. Microbiol. **86**:187.

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