

MATERIAL DATA SHEET**His₆-Ufm1 Activating Enzyme (UBA5), *human recombinant*
Cat. # E-319 (His₆-tagged)**

Uba5 is the E1-like enzyme responsible for the activation of the ubiquitin-like modifier, Ufm1 (**UL-500**). The enzyme contains a conserved ThiF domain with a nearby cysteine catalytic residue (Cys²⁵⁰) and ATP-binding motif GXGXXG. This protein is highly conserved in humans and other higher eukaryotes, but not yeast. The enzyme utilizes ATP to adenylate the C-terminal glycine residue of Ufm1, forming a high-energy thiolester bond with the active site cysteine residue and the release of AMP. The second step is the trans-esterification reaction whereby Ufm1 is transferred to the E2-like protein Ufc1 (**E2-675**). This protein has an N-terminal His₆ tag.

Product Information

Quantity:	25 µg
Stock:	X mg/ml (X µM) in 50 mM HEPES pH8.0. Concentration varies with lot number.
MW:	48 kDa
Purity:	> 95% by SDS-PAGE

Use & Storage

Use:	Typical enzyme concentration to support conjugation <i>in vitro</i> is 50-500 nM depending on conditions.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Dou, T. <i>et al.</i> (2005) <u>Molec. Biol. Rep.</u> 32 : 265-271. Komatsu, M <i>et al.</i> (2004) <u>EMBO J.</u> 23 : 1977-1986.
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