

**MATERIAL DATA SHEET****SUMO E1 (SAE1/UBA2), human recombinant**  
**Cat. # E-315**

Conjugation of the ubiquitin-like modifier SUMO (Sentrin) requires the activities of the heterodimeric E1 (SAE1/SAE2) and the UbcH9 E2 enzyme. The dimeric activating enzyme utilizes ATP to adenylate the C-terminal glycine residue of SUMO-1 (also SUMO-2 and SUMO3), forming a high-energy thioester bond with the cysteine residue of SAE2 and the concomitant release of AMP and PPI. The second step is the trans-esterification reaction whereby SUMO-1 is transferred to Cys<sup>93</sup> of UbcH9.

**Product Information**

<b>Quantity:</b>	10 µg
<b>Stock:</b>	X mg/ml (X µM) in 50 mM Tris.Cl, 5 mM β-ME, 10% glycerol Actual concentration will vary with specific Lot #.
<b>MW:</b>	110 kDa
<b>Purity:</b>	> 90% by SDS-PAGE

**Use & Storage**

<b>Use:</b>	Typical enzyme concentration to support conjugation <i>in vitro</i> is 50-200 nM depending on conditions.
<b>Storage:</b>	Store at -80°C. Avoid multiple freeze/thaw cycles.

**Literature**

<b>References:</b>	Azume Y., <i>et al.</i> (2001) <u>FASEB. J.</u> <b>15</b> :1825-1827 Desterro JMP., <i>et al.</i> (1999) <u>J. Biol. Chem.</u> <b>274</b> :10618-10624 Okuma T., <i>et al.</i> (1999) <u>Biochem Biophys Res Commun.</u> <b>254</b> :693698 Tatham M.H., <i>et al.</i> (2001) <u>J. Biol. Chem.</u> <b>276</b> :35368-35374
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