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**MATERIAL DATA SHEET**

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**GST-SUMO E1 (SAE1/UBA2), *S. cerevisiae***  
**Cat. # E-310 (GST-tagged)**

Conjugation of the ubiquitin-like modifier SUMO requires the activities of the heterodimeric E1 (Aos1/Uba2) 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 SUMO-3), forming a high-energy thiolester bond with the cysteine residue of Uba2 and the 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**

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|------------------|--|
| <b>Quantity:</b> | 50 µg  |
| <b>Stock:</b>    | X mg/ml (X µM) in 50 mM HEPES pH8.0, 150 mM NaCl.<br>Actual concentration will vary with specific Lot #. |
| <b>Purity:</b>   | > 90% by SDS-PAGE  |
| <b>MW:</b>       | 140 kDa  |

**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> | Dohmen R.J., <i>et al.</i> (1995) <u>J. Biol. Chem.</u> <b>270</b> :18099-18109<br>Gong L., <i>et al.</i> (1999) <u>FEBS Lett.</u> <b>448</b> :185-189<br>Johnson E.S., <i>et al.</i> (1997) <u>EMBO J.</u> <b>16</b> :5509-5519<br>Okuma T., <i>et al.</i> (1999) <u>Biochem Biophys Res Commun.</u> <b>254</b> :693698<br>Tatham M.H., <i>et al.</i> (2001) <u>J. Biol. Chem.</u> <b>276</b> :35368-35374 |
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