

**MATERIAL DATA SHEET****SUMO1, human recombinant**  
**Cat. # UL-712**

The ubiquitin-like SUMO-1 is conjugated to a variety of proteins in the presence of UbcH9 and the SAE1/SAE2 (human) or Aos1/Uba2 (yeast) activating enzyme. SUMO-1 is derived from the precursor pro-SUMO-1 (Accession # NM\_003352). Human SUMO-1 shares 46% and 47% identity with SUMO-2 and SUMO-3 respectively. SUMOylation can occur without the requirement of a specific E3 ligase activity, where SUMO is transferred directly from UbcH9 to specific substrates. SUMOylated substrates are primarily localized to the nucleus (RanGAP-1, RANBP2, PML, p53, Sp100, HIPK2) but there are also cytosolic substrates (I $\kappa$ B $\alpha$ , GLUT1, GLUT4). SUMO modification has been implicated in functions such as nuclear transport, chromosome segregation and transcriptional regulation.

**Product Information**

<b>Quantity:</b>	500 $\mu$ g
<b>Stock:</b>	X mg/ml (X $\mu$ M) in 50 mM HEPES pH 8.0, 150 mM NaCl, 1mM DTT. Actual protein concentration will vary with specific Lot #.
<b>MW:</b>	11.1 kDa
<b>Purity:</b>	> 95% by SDS-PAGE

**Use & Storage**

<b>Use:</b>	Typical <i>in vitro</i> concentrations for conjugate formation is 10-50 $\mu$ M depending on conditions.
<b>Storage:</b>	Store in -80°C. Avoid multiple freeze/thaw cycles.

**Literature**

<b>References:</b>	Desterro J.M., <i>et al.</i> (1997) <u>FEBs. Lett.</u> <b>417</b> :297-300 Okama T., <i>et al.</i> (1999) <u>Biochem. Biophys. Res. Comm.</u> <b>254</b> :693-698 Seeler J-S. and Dejean A. (2003) <u>Nat. Rev.</u> <b>4</b> :690-699 Su H-L., <i>et al.</i> (2002) <u>Gene</u> <b>296</b> :65-73 Tatham M.H., <i>et al.</i> (2001) <u>J. Biol. Chem.</u> <b>276</b> :35368-35374 Yeh E.T.H., <i>et al.</i> (2000) <u>Gene</u> <b>248</b> :1-14
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