

**MATERIAL DATA SHEET****SUMO3, human recombinant****Cat. # UL-762**

The ubiquitin-like SUMO-3 is conjugated to a variety of proteins in the presence of UbcH9 and the SAE1/SAE2 (human) or Aos1/Uba2 (yeast) activating enzyme. SUMO-3 is derived from the precursor pro-SUMO-3 (Accession # NM\_006936). Human SUMO-3 shares 47% and 87% identity with SUMO-1 and SUMO-2 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, transcriptional regulation, apoptosis and protein stability.

**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>	11.6 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 at -80°C once reconstituted. Avoid multiple freeze/thaw cycles.

**Literature**

<b>References:</b>	Lapenta V., <i>et al.</i> (1997) <u>Genomics</u> <b>40</b> :362-366 Gill G. (2004) <u>Genes.Dev.</u> <b>18</b> :2046-2059 Meluh P.B. and Koshland D. (1995) <u>Mol. Biol. Cell</u> <b>6</b> : 793-807 Saitoh H. and Hinchey J. (2000) <u>J.Biol. Chem.</u> <b>275</b> :6252-6258 Su H.L. and Li S. S.-L. (2002) <u>Gene</u> <b>296</b> : 65-73 Subramanian L., <i>et al.</i> (2003) <u>J.Biol. Chem.</u> <b>278</b> :9134-9141 Yeh E.T.H., <i>et al.</i> (2000) <u>Gene</u> <b>248</b> :1-14
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