

MATERIAL DATA SHEET**His₆-SUMO3, human recombinant****Cat. # UL-763**

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 κ B α , GLUT1, GLUT4). SUMO modification has been implicated in functions such as nuclear transport, chromosome segregation, transcriptional regulation, apoptosis and protein stability.

Product Information

Quantity:	500 μ g
Stock:	X mg/ml (X μ M) in 50 mM HEPES pH 8.0, 150 mM NaCl, 1mM DTT. Actual protein concentration will vary with specific Lot #.
MW:	11.4 kDa
Purity:	> 95% by SDS-PAGE

Use & Storage

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

Literature

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

For Laboratory Research Use Only, Not For Use in Humans