

MATERIAL DATA SHEET

SUMO1 Mutant K7R/K16R, *human recombinant* Cat. # ULM-716

Human SUMO-1 does not contain the exact ψ KXE consensus sequence found in SUMO-2 and SUMO-3. Within this motif ψ represents a large hydrophobic amino acid (I, L, or V), K is the lysine that becomes modified, X is any residue and E is glutamic acid. Many known SUMO-1 conjugation sites occur within this consensus sequence, but SUMOylation also occurs on lysine residues located within non-consensus regions. SUMO-1 has been shown to form chains *in vitro* and *in vivo* but often the linkage is uncharacterized, and the function of SUMO chains has not yet been fully elucidated. SUMO-1 multimerization *in vitro* has been shown to occur predominantly via lysines K7, K16 and K17. Mutation of lysines 7 and 16 to arginine is useful to investigate mono-SUMOylation requirements or to reduce poly-SUMO chain formation.

Product Information

Quantity:	250 μ g
Stock:	X mg/ml (X μ M) in 50 mM HEPES pH 8.0, 150 mM NaCl, 1mM DTT. Actual concentration varies with lot number.
MW:	11.1 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:	Bencsath K. P., <i>et al.</i> (2002) <i>J. Biol. Chem.</i> 277 : 47938–47945 Dohmen R.J., <i>et al.</i> (2004) <i>Biochem. Biophys. Acta</i> 1695 : 114-131 Johnson E. S. and Gupta A. A., (2001) <i>Cell</i> 106 : 735–744 Johnson E.S. (2004) <i>Annu. Rev. Biochem.</i> 73 : 355-382 Pedrioli G. A., <i>et al.</i> (2006) <i>Nat. Meth.</i> 3 :533-539 Pichler A., <i>et al.</i> (2002) <i>Cell</i> 108 : 109-120 Rodriguez M.S., <i>et al.</i> (2001) <i>J.Biol.Chem.</i> 276 : 12654-12659 Sampson D.A., <i>et al.</i> (2001) <i>J.Biol.Chem.</i> 276 : 21664-21669 Takahashi Y., <i>et al.</i> (2003) <i>J. Biochem.</i> 133 :415–422 Tatham M.H., <i>et al.</i> (2001) <i>J.Biol.Chem.</i> 276 : 35368-35374. Yang M., <i>et al.</i> (2006) <i>J.Biol.Chem.</i> 281 : 8264-8274
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