Lot # XXXXX

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MATERIAL DATA SHEET

SUMO-1 Mutant Protein Set, *human recombinant*
Cat. # K-712

The ubiquitin-like SUMO-1, SUMO-2 and SUMO3 proteins are conjugated to a variety of proteins in the presence of UbcH9 and the SAE1/SAE2 (human) or Aos1/Uba2 (yeast) activating enzyme. SUMO modification has been implicated in diverse functions such as nuclear transport, chromosome segregation and transcriptional regulation, apoptosis and protein stability. Human SUMO-1 shares 46% and 47% identity with SUMO-2 and SUMO-3 respectively and does not contain the exact ψKXE consensus sequence found in SUMO-2 and SUMO-3. Within this sequence 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 motif, 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 K7, K16 and K17. The proteins in this kit have these lysine residues mutated to arginine and can be used to investigate mono-SUMOylation requirements or to reduce poly-SUMO chain formation. Included is wild-type SUMO-1 to be used as a positive control in SUMO-1 conjugation assays which can be performed using the SUMO-1 Conjugation Kit (**K-710**).

Product Information

	Protein	MW	Concentration	Quantity
Supplied:	1. SUMO-1 wildtype	11.1 kDa	X mg/ml (X μM)	50 μg
	2. SUMO-1 K7R	11.1 kDa	X mg/ml (X μM)	50 μg
	3. SUMO-1 K16R	11.1 kDa	X mg/ml (X μM)	50 μg
	4. SUMO-1 K17R	11.1 kDa	X mg/ml (X μM)	50 μg
	5. SUMO-1 K7R K16R	11.1 kDa	X mg/ml (X μM)	50 μg
	6. SUMO-1 K7R K17R	11.1 kDa	X mg/ml (X μM)	50 μg
	7. SUMO-1 K16R K17R	11.1 kDa	X mg/ml (X μM)	50 μg
	8. SUMO-1 K7R K16R K17R	11.1 kDa	X mg/ml (X μM)	50 μg

Stock: 50mM HEPES pH 8.0, 150mM NaCl, 1 mM DTT.

Purity: > 95 % by SDS-PAGE

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Use & Storage

Use: Typical concentration to support conjugation reaction *in vitro* is 10 µM-50 µM depending on conditions.

Storage: Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:

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