

Lot # XXXXX

## MATERIAL DATA SHEET

### His<sub>6</sub>-SUMO Protein Set (1, 2, 3), *human recombinant* Cat. # K-705

Small Ubiquitin-like Modifiers (SUMOs) are a family of small, related proteins that can be enzymatically attached to a target protein by a post-translational modification process termed SUMOylation. There are four known SUMOs (SUMO1-4). All SUMO proteins share a conserved Ubiquitin domain and a C-terminal diglycine cleavage/attachment site. Following cleavage of a C-terminal pro-segment, the C-terminal glycine residue of SUMO is enzymatically attached to a lysine residue on a target protein. In humans, SUMO is conjugated to a variety of molecules in the presence of the SAE1/UBA2 SUMO-activating (E1) enzyme and the UBE2I/Ubc9 SUMO-conjugating (E2) enzyme. In yeast, the SUMO-activating (E1) enzyme is Aos1/Uba2p. SUMOylation can occur without the requirement of a specific SUMO ligase (E3), where SUMO is transferred directly from UBE2I/Ubc9 to specific substrates. Unlike SUMO1, which is usually conjugated to proteins as a monomer, SUMO2 and SUMO3 are known to form high molecular weight polymers on proteins. SUMO precursor processing and deconjugation are catalyzed by a family of cysteine proteases known as SUMO-specific proteases (SENPs) and DeSUMOylating Isopeptidase 1.

Product Information				
	Protein	MW	Concentration	Quantity
<b>Supplied:</b>	1. His <sub>6</sub> -SUMO1	12.0 kDa	2.95 mg/ml (250 µM)	100 µg
	2. His <sub>6</sub> -SUMO2	11.4 kDa	2.90 mg/ml (250 µM)	100 µg
	3. His <sub>6</sub> -SUMO3	11.5 kDa	2.90 mg/ml (250 µM)	100 µg
<b>Stock:</b>	50mM HEPES pH 8.0, 150mM NaCl, 1 mM DTT			
<b>Purity:</b>	> 95 % by SDS-PAGE under reducing conditions and visualized using colloidal Coomassie Blue stain			

Use & Storage	
<b>Use:</b>	Typical concentration to support conjugation reaction <i>in vitro</i> is 10 µM-50 µM depending on conditions.
<b>Storage:</b>	Store at -80°C. Avoid multiple freeze/thaw cycles.

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### Literature

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