Lot # XXXXX

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MATERIAL DATA SHEET

SUMO Protein Set, *human recombinant*
Cat. # K-700

The ubiquitin-like SUMO-1, SUMO-2 and SUMO-3 proteins are conjugated to a variety of proteins in the presence of UbcH9 and the SAE1/SAE2 (human) or Aos1/Uba2 (yeast) activating enzyme. Human SUMO-1 shares 46% and 47% identity with SUMO-2 and SUMO-3 respectively. SUMO-1 is usually conjugated to proteins as a monomer. SUMO-2 shares 86% identity with SUMO-3 and these isoforms are known to form SUMO chains. 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 (IκBα, GLUT1, GLUT4, E2-25K). Unlike ubiquitination, SUMOylation does not appear to target proteins for degradation by the proteasome. SUMO modification has been implicated in diverse functions such as nuclear transport, chromosome segregation and transcriptional regulation, apoptosis and protein stability.

Product Information

Supplied:

Protein	MW	Concentration	Quantity
1. SUMO-1	11.1 kDa	X mg/ml (X μM)	100 μg
2. SUMO-2	10.5 kDa	X mg/ml (X μM)	100 μg
3. SUMO-3	10.6 kDa	X mg/ml (X μM)	100 μg

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

Purity: > 95 % by SDS-PAGE

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.

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Literature

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