

SUMO E1 Activating Enzyme

Cat. # SU101

Background:

SUMO (Small Ubiquitin-related Modifier) is an ubiquitin-like family member that regulates a wide range of key cellular events. Sumoylation of proteins alters their intracellular localization, stability and interaction with other proteins. SUMO is conjugated to its substrates utilizing a cascade of events involving activation with E1 enzyme (SAE1/SAE2), conjugation, involving the E2 enzyme (UBC9) and substrate modification, through the cooperation of the E2 and E3 protein ligases. SUMO and Nedd8 pathways utilize a single E1 and a single E2 in combination with a few known E3s. The dimeric activating enzyme E1 utilizes ATP to adenylate the C-terminal glycine residue of all SUMO proteins, forming a high-energy thiolester bond with the cysteine residue of SAE2.

SUMO E1 enzyme is a heterodimer of His-tagged SAE1 and untagged SAE2

Alternate names: SAE1/SAE2, UBA2

Product Information

Purity: >80%

Molecular Weight: 39 kDa and 73 kDa

Quantity: 25µg

Physical State: Liquid

Buffer: 20mM Tris, 150 mM NaCl, 2 mM βME, 10% glycerol

Source: Human recombinant enzyme purified from *E.coli*

Tag: His6-tagged SAE1 and untagged SAE2

Activity: 100nM is used for in vitro conjugation

Storage: -80° C. Avoid repeated freeze/thaw cycles

References

1. Johnson, E.S. Protein modification by SUMO. Annu. Rev. Biochem. 73, 355–382 (2004)
2. Melchior, F. SUMO—nonclassical ubiquitin. Annu. Rev. Cell Dev. Biol. 16, 591–626 (2000)
3. Boggio R et al. A mechanism for inhibiting the SUMO pathway. Mol Cell. 16(4):549-61(2004)
4. Lin, D. et al. Identification of a substrate recognition site on Ubc9. J. Biol. Chem. 277, 21740–21748 (2002)

All products are for research use only • not intended for human or animal diagnostic or therapeutic uses
Copyright © 2010 LifeSensors, Inc. All Rights Reserved