

# Recombinant Human SUMO1 Activating Enzyme Subunit 1, T7-tagged

**Cat. No.** SAE1-1459H    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	SAE1 Recombinant Human produced in E.Coli is a single, non-glycosylated polypeptide chain containing 378 amino acids (1-346 a.a.) and having a molecular mass of 42.2 kDa. The SAE1 is fused to 32 amino acid T7-Tag at N-terminus and purified by proprietary chromatographic techniques.
<b>Species</b>	Human
<b>Source</b>	Human
<b>ProteinLength</b>	1-346 aa
<b>Description</b>	SAE1 is part of the ubiquitin-activating E1 family of proteins and participates in the significant first step of the UBL1 conjugation pathway. Proteins conjugated to Ub are marked for progressive degradation by the 26S Proteasome. SAE1 acts as a UBL1 E1 ligase mediating the ATP-dependent activation of UBL1. SAE1 binds with UBLE1A and UBLE1B to form a heterodimer which can bind UBL1. SAE1 is a dimeric enzyme that takes part as a E1 ligase for SUMO1, SUMO2, SUMO3, and probably SUMO4. SAE1 regulates ATP-dependent activation of SUMO proteins and formation of a thioester with a conserved cysteine residue on SAE2.
<b>Form</b>	SAE1 Human solution containing 20mM Tris pH-8, 1mM DTT & 10% glycerol.
<b>Purity</b>	Greater than 90.0% as determined by SDS-PAGE

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**Physical Appearance** Sterile filtered colorless solution.

**Amino acid sequence**

MHHHHHMAS MTGGQQMGRD LYDDDDKDRW GSMVEKEEAG GGISEEEAAQ  
 YDRQIRLWGL EAQKRLRASR VLLVGLKGLG AEIAKNLILA GVKGLTMLDH  
 EQVTPEDPGA QFLIRTGSVG RNRAEASLER AQNLNPMVDV KVDTEIEKK  
 PESFFTQFDA VCLTCCSRDV IVKVDQICHK NSIKFFTGDV FGYHGYTFAN  
 LGEHEFVEEK TKVAKVSQGV EDGPDTKRAK LDSSETTMVK KKVVFPCVKE  
 ALEVDWSSEK AKAALKRRTS DYFLLQVLLK FRTDKGRDPS SDTYEEDSEL  
 LLQIRNDVLD SLGISPDLLP EDFVRYCFSE MAPVCAVVG ILAQEIVKAL  
 SQRDPPHNNF FFDGMKGNG IVECLGPK.

**Storage** SAE1 Human although stable at 4°C for 1 week, should be stored desiccated below -18°C. Please prevent freeze thaw cycles.

## GENE INFORMATION

**Gene Name** [SAE1 SUMO1 activating enzyme subunit 1 \[ Homo sapiens \]](#)

**Official Symbol** [SAE1](#)

**Synonyms** SAE1; SUMO1 activating enzyme subunit 1; AOS1; SUA1; UBLE1A; FLJ3091; HSPC140; SUMO-activating enzyme subunit 1; activator of SUMO1; SUMO-1 activating enzyme subunit 1; sentrin/SUMO-activating protein AOS1; SUMO-1 activating enzyme E1 N subunit; ubiquitin-like 1-activating enzyme E1A; ubiquitin-like protein SUMO-1 activating enzyme

**Gene ID** [10055](#)

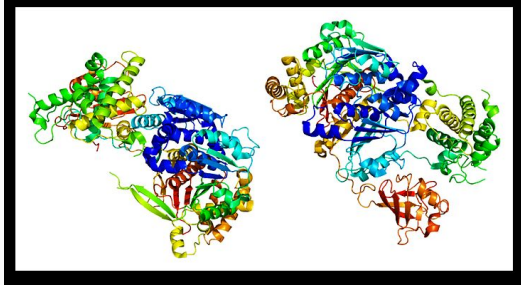
**mRNA Refseq** [NM\\_001145713](#)

**Protein Refseq** [NP\\_001139185](#)

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<b>MIM</b>	613294
<b>UniProt ID</b>	Q9UBE0
<b>Chromosome Location</b>	19q13
<b>Pathway</b>	Adaptive Immunity Signaling; Class I MHC mediated antigen processing & presentation; Class I MHC mediated antigen processing & presentation; Immune System; Ubiquitin mediated proteolysis
<b>Function</b>	ATP-dependent protein binding; contributes_to SUMO activating enzyme activity; enzyme activator activity; ligase activity; protein C-terminus binding; protein binding; protein heterodimerization activity; ubiquitin activating enzyme activity
<b>PDB renderingbased on 1y8q</b>	

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