

Recombinant Human SUMO1 Activating Enzyme Subunit 1, T7-tagged

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

SPECIFICATION

Product Overview	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.
Species	Human
Source	Human
ProteinLength	1-346 aa
Description	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.
Form	SAE1 Human solution containing 20mM Tris pH-8, 1mM DTT & 10% glycerol.
Purity	Greater than 90.0% as determined by SDS-PAGE

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Physical Appearance	Sterile filtered colorless solution.
Amino acid sequence	MHHHHHHMAS MTGGQQMGRD LYDDDDKDRW GSMVEKEEAG GGISEEEAAQ YDRQIRLWGL EAQKRLRASR VLLVGLKGLG AEIAKNLILA GVKGLTMLDH EQVTPEDPGA QFLIRTGSVG RNRAEASLER AQNLNPMVDV KVDTEIEKK PESFFTQFDA VCLTCCSRDV IVKVDQICHK NSIKFFTGDV FGYHGYTFAN LGEHEFVEEK TKVAKVSQGV EDGPDTKRAK LDSSETTMVK KKVVFPCPVKE ALEVDWSSEK AKAALKRTTS DYFLLQVLLK FRTDKGRDPS SDTYEEDSEL LLQIRNDVLD SLGISPDLLP EDFVRYCFSE MAPVCAVVGG 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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MIM	613294
UniProt ID	Q9UBE0
Chromosome Location	19q13
Pathway	Adaptive Immunity Signaling; Class I MHC mediated antigen processing & presentation; Class I MHC mediated antigen processing & presentation; Immune System; Ubiquitin mediated proteolysis
Function	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
PDB renderingbased on 1y8q	