

Human SAE1 Protein (His & GST Tag)

Catalog Number: 13921-H20B



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

AOS1; HSPC140; SUA1; UBLE1A; 2400010M20Rik; 2610044L12Rik; AL033372; AOS1; AW743391; D7Erttd177e; HSPC140; Sua1; Uble1a

Protein Construction:

A DNA sequence encoding the human SAE1 (Q9UBE0) (Met1-Lys346) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human SAE1 /GST chimera consists of 583 amino acids and has a calculated molecular mass of 66.3 kDa. The recombinant protein migrates as an approximately 61 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

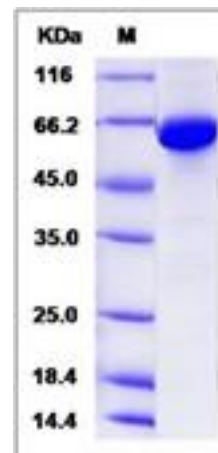
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

SAE1 belongs to the ubiquitin-activating E1 family. It is a heterodimer that acts as a E1 ligase for SUMO1, SUMO2, SUMO3, and probably SUMO4. It functions 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 also regulates ATP-dependent activation of SUMO proteins and formation of a thioester with a conserved cysteine residue on SAE2. SAE1 and UBA2 form a heterodimer that functions as a SUMO-activating enzyme for the sumoylation of proteins.

References

1. Gong L, *et al.* (1999) Molecular cloning and characterization of human AOS1 and UBA2, components of the sentrin-activating enzyme complex. *FEBS Lett.* 448(1):185-9.
2. Lois LM, *et al.* (2005) Structures of the SUMO E1 provide mechanistic insights into SUMO activation and E2 recruitment to E1. *EMBO J.* 24(3):439-51.
3. Tatham MH, *et al.* (2001) Polymeric chains of SUMO-2 and SUMO-3 are conjugated to protein substrates by SAE1/SAE2 and Ubc9. *J Biol Chem.* 276(38):35368-74.

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