

## Anti-SUMO Activating Enzyme E1 (SAE1) pS185 (RABBIT) Antibody - 600-401-B24S

**Code:** 600-401-B24S

**Size:** 25 µL

**Product Description:** Anti-SUMO Activating Enzyme E1 (SAE1) pS185 (RABBIT) Antibody - 600-401-B24S

**Concentration:** 0.71 mg/ml

**PhysicalState:** Liquid (sterile filtered)

<b>Label</b>	Unconjugated
<b>Host</b>	Rabbit
<b>Gene Name</b>	SAE1
<b>Species Reactivity</b>	human, bovine, mouse, rat, dog
<b>Buffer</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Stabilizer</b>	None
<b>Preservative</b>	0.01% (w/v) Sodium Azide
<b>Storage Condition</b>	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
<b>Synonyms</b>	rabbit anti-SAE1 pS185 antibody, rabbit anti-SUMO activating enzyme subunit 1 pS185 antibody, Ubiquitin-like 1 activating enzyme E1A, UBLE1A, AOS1, SAE1, SUA1, SAE-1
<b>Application Note</b>	This purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band at ~37 kDa in size corresponding to phosphorylated SAE1 protein by western blotting in the appropriate cell lysate or extract. This phospho-specific antibody reacts with human SAE1 pS185 and shows minimal reactivity by ELISA against the non-phosphorylated form of the immunizing peptide.
<b>Background</b>	SUMO E1 activating enzyme (also called Ubiquitin-like 1 activating enzyme E1A, UBLE1A, AOS1, SAE1, and SUA1) with SAE2 (also known as UBA2) forms a heterodimeric (SAE1/SAE2) enzyme that activates the ubiquitin-like SUMO proteins (SUMO stands for Small Ubiquitin-like MOdifier.) The SAE1 (SUMO Activating Enzyme 1) subunit resembles the N-terminal half of yeast UBA1; the SAE2 (also called Uba2) subunit corresponds to the C-terminal part of yeast UBA1 and contains the active site cysteine. In the SUMO activation step, SAE1/SAE2 uses ATP to adenylate the C-terminal glycine of SUMO-1 (the first of the three different mammalian SUMO proteins) then forms a high-energy thioester bond between the C-terminal glycine and the active site cysteine in SAE2 (Uba2). In the conjugation step, the SUMO moiety is transferred from SAE1/SAE2 to the active site cysteine (Cys 93) of the SUMO conjugating enzyme (SUMO E2, Ubc9) forming a SUMO-E2 thioester complex.
<b>Purity And Specificity</b>	This purified antibody is directed against human SUMO Activating Enzyme E1 protein. The product was purified from monospecific antiserum by affinity chromatography. This antibody is specific for human SAE1 protein phosphorylated at S185. A BLAST analysis using the sequence of the immunizing peptide was used to suggest that this antibody would react with SUMO Activating Enzyme E1 protein from human (100%), bovine, dog, chimpanzee (96%), mouse (93%), and rat (92%) based on a high degree of sequence homology. Cross reactivity against this protein from other sources has not been determined.
<b>Assay Dilutions</b>	User Optimized
<b>ELISA</b>	1:5,000 - 1:25,000
<b>Western Blot</b>	2µg/mL
<b>Other Assays</b>	User Optimized
<b>Expiration</b>	Expiration date is three (3) months from date of opening.
<b>Immunogen</b>	This purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region surrounding S185 of the human SUMO Activating Enzyme E1 protein.
<b>General Reference</b>	Wrighton KH, and Feng XH. (2006). Uba2. AfCS-Nature Molecule Pages. doi:10.1038/mp.a003681.01Lois,L.M. and Lima,C.D. (2005) Structures of the SUMO E1 provide mechanistic insights into SUMO activation and E2 recruitment to E1. EMBO J. 24 (3), 439-451 Desterro,J.M., Rodriguez,M.S., Kemp,G.D. and Hay,R.T. (1999) Identification of the enzyme required for activation of the small ubiquitin-like protein SUMO-1. J. Biol. Chem. 274 (15), 10618-10624. Gong,L., Li,B., Millas,S. and Yeh,E.T. (1999) Molecular cloning and characterization of human AOS1 and UBA2, components of the sentrin-activating enzyme complex. FEBS Lett. 448 (1), 185-189.

## Related Products

200-301-268	Anti-AKT pS473 (MOUSE) Monoclonal Antibody - 200-301-268
600-401-879	Anti-HDAC-1 (RABBIT) Antibody - 600-401-879
610-4302	Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302
611-1302	Anti-RABBIT IgG (H&L) (GOAT) Antibody Peroxidase Conjugated - 611-1302

## Related Links

UniProtKB - Q9UBE0

<http://www.uniprot.org/uniprot/Q9UBE0>

NCBI - NP\_005491.1

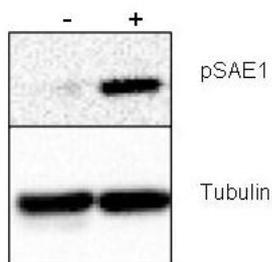
[http://www.ncbi.nlm.nih.gov/protein/NP\\_005491.1](http://www.ncbi.nlm.nih.gov/protein/NP_005491.1)

GeneID - 10055

## Images

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Western blot using Rockland's Rabbit anti-SAE1 pS185 antibody shows detection of phosphorylated SAE1. Left lane (-) contains 20 µg human HeLa whole cell protein. Right lane (+) contains 20 µg human HeLa whole cell protein from cells pre-treated with phosphatase inhibitor cocktail to prevent dephosphorylation of the target. Proteins were separated on a 10% SDS-PAGE and transferred onto nitrocellulose. After blocking with 5% milk-TBST 1 hr at room temperature, the membrane was probed with the primary antibody diluted to 2 µg/mL at room temperature for 3 hr followed by washes and reaction with HRP-conjugated secondary and ECL imaging. Personal communication, Xin-Hua Feng, Baylor College of Medicine, Houston, TX.



## Disclaimer

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