

**PAPSS1 Antibody (C-term A607)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP2607b**

### Specification

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#### PAPSS1 Antibody (C-term A607) - Product Information

Application	WB,E
Primary Accession	<a href="#">O43252</a>
Other Accession	<a href="#">NP_005434</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	592-624

#### PAPSS1 Antibody (C-term A607) - Additional Information

Gene ID 9061

#### Other Names

Bifunctional 3'-phosphoadenosine 5'-phosphosulfate synthase 1, PAPS synthase 1, PAPSS 1, Sulfurylase kinase 1, SK 1, SK1, Sulfate adenyltransferase, ATP-sulfurylase, Sulfate adenylate transferase, SAT, Adenyl-sulfate kinase, 3'-phosphoadenosine-5'-phosphosulfate synthase, APS kinase, Adenosine-5'-phosphosulfate 3'-phosphotransferase, Adenylylsulfate 3'-phosphotransferase, PAPSS1, ATPSK1, PAPSS

#### Target/Specificity

This PAPSS1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 592-624 amino acids from the C-terminal region of human PAPSS1.

#### Dilution

WB~~1:1000

#### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

#### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

PAPSS1 Antibody (C-term A607) is for research use only and not for use in diagnostic or therapeutic procedures.

#### PAPSS1 Antibody (C-term A607) - Protein Information

Name PAPSS1

### Synonyms ATPSK1, PAPSS

**Function** Bifunctional enzyme with both ATP sulfurylase and APS kinase activity, which mediates two steps in the sulfate activation pathway. The first step is the transfer of a sulfate group to ATP to yield adenosine 5'-phosphosulfate (APS), and the second step is the transfer of a phosphate group from ATP to APS yielding 3'-phosphoadenylylsulfate (PAPS: activated sulfate donor used by sulfotransferase). In mammals, PAPS is the sole source of sulfate; APS appears to be only an intermediate in the sulfate-activation pathway (PubMed:[14747722](#), PubMed:[9576487](#), PubMed:[9648242](#), PubMed:[9668121](#)). Required for normal biosynthesis of sulfated L-selectin ligands in endothelial cells (PubMed:[9576487](#)).

### Tissue Location

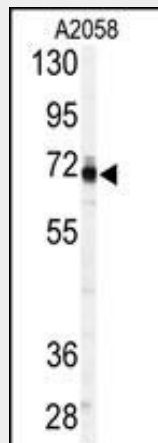
Expressed in testis, pancreas, kidney, thymus, prostate, ovary, small intestine, colon, leukocytes and liver. Also expressed in high endothelial venules (HEV) cells and in cartilage

### PAPSS1 Antibody (C-term A607) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### PAPSS1 Antibody (C-term A607) - Images



Western blot analysis of anti-PAPSS1 Antibody (C-term A607) (Cat.#AP2607b) in A2058 cell line lysates (35ug/lane). PAPSS1 (arrow) was detected using the purified Pab.

### PAPSS1 Antibody (C-term A607) - Background

Sulfotransferase (SULT) enzymes catalyze the sulfate conjugation of many drugs, xenobiotic compounds, hormones, and neurotransmitters. 3'-phosphoadenosine 5'-phosphosulfate (PAPS) synthase (PAPSS) catalyzes the biosynthesis of PAPS which serves as the universal sulfonate donor compound for all sulfotransferase reactions. In humans, PAPS is synthesized from adenosine 5-prime triphosphate (ATP) and inorganic sulfate by 2 isoforms, PAPSS1 and PAPSS2 (603005).

Bifunctional PAPSS1 is comprised of an N-terminal APS kinase domain, and a C-terminal ATP sulfurylase domain. Full-length protein has significantly less APS kinase activity than the N-terminal fragment, suggesting that the C-terminal domain exerts a regulatory role on the N-terminal APS kinase activity. In humans there are two major isoforms: PAPSS1 and PAPSS2. In brain and skin PAPSS1 is the major isoform, whereas in liver, cartilage and adrenal glands PAPSS2 isoform expression dominates. The predicted 623-amino acid protein is 98% identical to mouse PAPS synthase. The N-terminal 268-amino acid region of human PAPS synthase resembles APS kinases from other organisms and contains 3 conserved nucleotide-binding motifs.

#### **PAPSS1 Antibody (C-term A607) - References**

Biochemistry 43 (14), 4356-4365 (2004)  
IUBMB Life 55 (1), 1-11 (2003)  
Biochem. J. 365 (PT 2), 497-504 (2002)  
Biochem. Biophys. Res. Commun. 268 (2), 437-444 (2000)  
FASEB J. 14 (2), 345-354 (2000)

#### **PAPSS1 Antibody (C-term A607) - Citations**

- [Sphingosine kinase as an oncogene: autocrine sphingosine 1-phosphate modulates ML-1 thyroid carcinoma cell migration by a mechanism dependent on protein kinase C-alpha and ERK1/2.](#)