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PAPSS1 Antibody (C-term A607) Blocking Peptide

Synthetic peptide
Catalog # BP2607b

Specification

PAPSS1 Antibody (C-term A607) Blocking Peptide - Product Information

Primary Accession	O43252
Other Accession	NP_005434

PAPSS1 Antibody (C-term A607) Blocking Peptide - 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 adenylyltransferase, ATP-sulfurylase, Sulfate adenylate transferase, SAT, Adenylyl-sulfate kinase, 3'-phosphoadenosine-5'-phosphosulfate synthase, APS kinase, Adenosine-5'-phosphosulfate 3'-phosphotransferase, Adenylylsulfate 3'-phosphotransferase, PAPSS1, ATPSK1, PAPSS

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2607b was selected from the C-term region of human PAPSS1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PAPSS1 Antibody (C-term A607) Blocking Peptide - 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) Blocking Peptide - Protocols

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

- Blocking Peptides

PAPSS1 Antibody (C-term A607) Blocking Peptide - Images

PAPSS1 Antibody (C-term A607) Blocking Peptide - 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) Blocking Peptide - 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)