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PAPSS1 Antibody (N-term K9)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2607a

Product Information

Application	WB, E
Primary Accession	O43252
Other Accession	Q60967, NP_005434
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	70833
Antigen Region	1-30

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	This PAPSS1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human PAPSS1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
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 (N-term K9) is for research use only and not for use in diagnostic or therapeutic procedures.

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

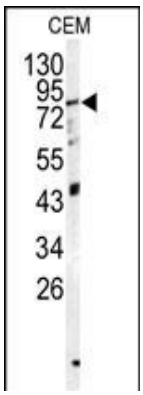
Background

Three-prime-phosphoadenosine 5-prime-phosphosulfate (PAPS) is the sulfate donor cosubstrate for all sulfotransferase (SULT) enzymes. SULTs catalyze the sulfate conjugation of many endogenous and exogenous compounds, including drugs and other xenobiotics. In humans, PAPS is synthesized from adenosine 5-prime triphosphate (ATP) and inorganic sulfate by 2 isoforms, PAPSS1 and PAPSS2.

References

Venkatachalam, K.V., IUBMB Life 55(1):1-11 (2003).
Xu, Z.H., et al., Biochem. Biophys. Res. Commun. 268(2):437-444 (2000).
Venkatachalam, K.V., et al., J. Biol. Chem. 273(30):19311-19320 (1998).
ul Haque, M.F., et al., Nat. Genet. 20(2):157-162 (1998).
Girard, J.P., et al., FASEB J. 12(7):603-612 (1998).

Images



Western blot analysis of PAPSS1 antibody (N-term K9) (Cat.# AP2607a) in CEM cell line lysates (35ug/lane). PAPSS1 (arrow) was detected using the purified Pab.

Citations

- The sphingosine 1-phosphate receptor 5 and sphingosine kinases 1 and 2 are localised in centrosomes: possible role in regulating cell division.