

PAPSS 2 (C-13): sc-47308

BACKGROUND

Bifunctional 3'-phosphoadenosine 5'-phosphosulfate synthetases (PAPS synthetase or PAPSS), also designated sulfurylase kinase (SK), are important for sulfate assimilation in the sulfur metabolism pathway. PAPS proteins are bifunctional enzymes with APS kinase and ATP sulfurylase activity, which mediate two steps in the sulfate activation pathway. The PAPSS proteins belong to the APS kinase family and to the sulfate adenylyltransferase family of proteins. In mammals, PAPS proteins are the sole source of sulfate. During postnatal growth, PAPS proteins may play a role in skeletogenesis. Defects in the PAPSS2 gene can cause the Pakistani type of spondyloepimetaphyseal dysplasia (SEMD), an autosomal recessive form of SEMD characterized by short, bowed limbs, enlarged knee joints and mild brachydactyly.

REFERENCES

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- Xu, Z.H., et al. 2000. Human 3'-phosphoadenosine 5'-phosphosulfate synthetase 1 (PAPSS1) and PAPSS2: gene cloning, characterization and chromosomal localization. *Biochem. Biophys. Res. Commun.* 268: 437-444.
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- Genevieve, D., et al. 2005. Exclusion of the dymeclin and PAPSS2 genes in a novel form of spondyloepimetaphyseal dysplasia and mental retardation. *Eur. J. Hum. Genet.* 13: 541-546.

CHROMOSOMAL LOCATION

Genetic locus: PAPSS2 (human) mapping to 10q23.2; Paps2 (mouse) mapping to 19 C1.

SOURCE

PAPSS 2 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PAPSS 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47308 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

PAPSS 2 (C-13) is recommended for detection of PAPSS 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with PAPSS 1.

PAPSS 2 (C-13) is also recommended for detection of PAPSS 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PAPSS 2 siRNA (h): sc-61293, PAPSS 2 siRNA (m): sc-61294, PAPSS 2 shRNA Plasmid (h): sc-61293-SH, PAPSS 2 shRNA Plasmid (m): sc-61294-SH, PAPSS 2 shRNA (h) Lentiviral Particles: sc-61293-V and PAPSS 2 shRNA (m) Lentiviral Particles: sc-61294-V.

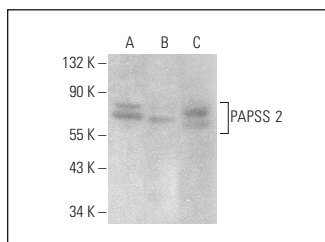
Molecular Weight of PAPSS 2: 70 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, MDA-MB-231 cell lysate: sc-2232 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PAPSS 2 (C-13): sc-47308. Western blot analysis of PAPSS 2 expression in PC-12 (A), MDA-MB-231 (B) and NIH/3T3 (C) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.