

PPC Synthetase (T-13): sc-137682

BACKGROUND

PPC Synthetase, also known as PPCS (phosphopantothenoylcysteine synthetase) or COAB, is a 311 amino acid protein that belongs to the PPC Synthetase family. Moderately conserved, PPC Synthetase exists as a dimer with identical monomers. Some components of the monomer fold resemble a group of NAD-dependent enzymes, while other components resemble the ribokinase fold. In contrast to the *E. coli* ortholog, mammalian PPC Synthetase exhibits a preference for ATP over CTP. PPC Synthetase catalyzes the first step in the biosynthesis of coenzyme A (CoA) from pantothenic acid (vitamin B5), where cysteine is conjugated to 4'-phosphopantothenate to form 4-phosphopantothenoylcysteine. Inhibition research with GTP and UTP, as well as product inhibition research with CMP and AMP, suggest that human PPC Synthetase lacks strong nucleotide selectivity. The gene that encodes PPC Synthetase maps to human chromosome 1p34.2.

REFERENCES

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6. Genschel, U. 2004. Coenzyme A biosynthesis: reconstruction of the pathway in archaea and an evolutionary scenario based on comparative genomics. *Mol. Biol. Evol.* 21: 1242-1251.
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CHROMOSOMAL LOCATION

Genetic locus: PPCS (human) mapping to 1p34.2; Ppcs (mouse) mapping to 4 D2.1.

SOURCE

PPC Synthetase (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PPC Synthetase of human origin.

RESEARCH USE

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

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-137682 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PPC Synthetase (T-13) is recommended for detection of PPC Synthetase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PPC Synthetase (T-13) is also recommended for detection of PPC Synthetase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PPC Synthetase siRNA (h): sc-88373, PPC Synthetase siRNA (m): sc-152406, PPC Synthetase shRNA Plasmid (h): sc-88373-SH, PPC Synthetase shRNA Plasmid (m): sc-152406-SH, PPC Synthetase shRNA (h) Lentiviral Particles: sc-88373-V and PPC Synthetase shRNA (m) Lentiviral Particles: sc-152406-V.

Molecular Weight of PPC Synthetase: 34 kDa.

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) 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.

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.