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PCCA Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP12328c

Specification

PCCA Antibody (Center) Blocking peptide - Product Information

Primary Accession P05165

PCCA Antibody (Center) Blocking peptide - Additional Information

Gene ID 5095

Other Names
Propionyl-CoA carboxylase alpha chain, mitochondrial, PCCase subunit alpha, Propanoyl-CoA:carbon dioxide ligase subunit alpha, PCCA

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.

PCCA Antibody (Center) Blocking peptide - Protein Information

Name PCCA (HGNC:8653)

Function
This is one of the 2 subunits of the biotin-dependent propionyl-CoA carboxylase (PCC), a mitochondrial enzyme involved in the catabolism of odd chain fatty acids, branched-chain amino acids isoleucine, threonine, methionine, and valine and other metabolites (PubMed:6765947, PubMed:8434582). Propionyl-CoA carboxylase catalyzes the carboxylation of propionyl-CoA/propanoyl-CoA to D-methylmalonyl-CoA/(S)-methylmalonyl-CoA (PubMed:10101253, PubMed:6765947, PubMed:8434582). Within the holoenzyme, the alpha subunit catalyzes the ATP-dependent carboxylation of the biotin carried by the biotin carboxyl carrier (BCC) domain, while the beta subunit then transfers the carboxyl group from carboxylated biotin to propionyl-CoA (By similarity). Propionyl-CoA carboxylase also significantly acts on butyryl-CoA/butanoyl-CoA, which is converted to ethylmalonyl-CoA/(2S)- ethylmalonyl-CoA at a much lower rate (PubMed:6765947). Other alternative minor substrates include (2E)-butenoyl-CoA/crotonoyl-CoA (By similarity).

Cellular Location
Mitochondrion matrix

PCCA Antibody (Center) Blocking peptide - Protocols

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

- Blocking Peptides

PCCA Antibody (Center) Blocking peptide - Images

PCCA Antibody (Center) Blocking peptide - Background

The protein encoded by this gene is the alpha subunit ofthe heterodimeric mitochondrial enzyme Propionyl-CoA carboxylase.PCCA encodes the biotin-binding region of this enzyme. Mutations ineither PCCA or PCCB (encoding the beta subunit) lead to an enzymedeficiency resulting in propionic acidemia. Multiple transcriptvariants encoding different isoforms have been found for this gene.

PCCA Antibody (Center) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Huang, C.S., et al. Nature 466(7309):1001-1005(2010)Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)MacDonald, M.J., et al. Diabetologia 52(6):1087-1091(2009)