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OXCT1 Blocking Peptide (Center)
Synthetic peptide
Catalog # BP21464c

Specification

OXCT1 Blocking Peptide (Center) - Product Information

Primary Accession P55809

OXCT1 Blocking Peptide (Center) - Additional Information

Gene ID 5019

Other Names
Succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial, 3-oxoacid CoA-transferase 1, Somatic-type succinyl-CoA:3-oxoacid CoA-transferase, SCOT-s, OXCT1, OXCT, SCOT

Target/Specificity
The synthetic peptide sequence is selected from aa 272-286 of HUMAN OXCT1

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.

OXCT1 Blocking Peptide (Center) - Protein Information

Name OXCT1

Synonyms OXCT, SCOT

Function
Key enzyme for ketone body catabolism. Catalyzes the first, rate-limiting step of ketone body utilization in extrahepatic tissues, by transferring coenzyme A (CoA) from a donor thiolester species (succinyl-CoA) to an acceptor carboxylate (acetoacetate), and produces acetoacetyl-CoA. Acetoacetyl-CoA is further metabolized by acetoacetyl- CoA thiolase into two acetyl-CoA molecules which enter the citric acid cycle for energy production (PubMed:10964512). Forms a dimeric enzyme where both of the subunits are able to form enzyme-CoA thiolester intermediates, but only one subunit is competent to transfer the CoA moiety to the acceptor carboxylate (3-oxo acid) and produce a new acyl- CoA. Formation of the enzyme-CoA intermediate proceeds via an unstable anhydride species formed between the carboxylate groups of the enzyme and substrate (By similarity).

Cellular Location
Mitochondrion {ECO:0000250|UniProtKB:B2GV06}.

Tissue Location
Abundant in heart, followed in order by brain, kidney, skeletal muscle, and lung, whereas in liver it is undetectable Expressed (at protein level) in all tissues (except in liver), most abundant in myocardium, then brain, kidney, adrenal glands, skeletal muscle and lung; also detectable in leukocytes and fibroblasts

OXCT1 Blocking Peptide (Center) - Protocols

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

- Blocking Peptides

OXCT1 Blocking Peptide (Center) - Images

OXCT1 Blocking Peptide (Center) - Background

Key enzyme for ketone body catabolism. Transfers the CoA moiety from succinate to acetoacetate. Formation of the enzyme-CoA intermediate proceeds via an unstable anhydride species formed between the carboxylate groups of the enzyme and substrate.

OXCT1 Blocking Peptide (Center) - References

Kassovska-Bratinova S.,et al.Am. J. Hum. Genet. 59:519-528(1996).
Fukao T.,et al.Genomics 68:144-151(2000).
Schmutz J.,et al.Nature 431:268-274(2004).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Reymond M.A.,et al.Submitted (FEB-1997) to UniProtKB.