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OXCT1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21464c

Product Information

Application	WB, E
Primary Accession	P55809
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB50059
Calculated MW	56158

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	This OXCT1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 272-306 amino acids from the Central region of human OXCT1.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	OXCT1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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

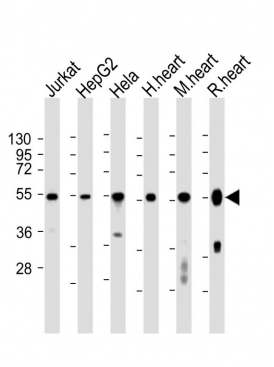
Background

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.

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.

Images



All lanes : Anti-OXCT1 Antibody (Center) at 1:2000 dilution Lane 1: Jurkat whole cell lysates Lane 2: HepG2 whole cell lysates Lane 3: Hela whole cell lysates Lane 4: human heart lysates Lane 5: mouse heart lysates Lane 6: rat heart lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 56 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Tandem mass tags labeled quantitative proteomics to study the effect of tobacco smoke exposure on the rat lung.