



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
San Diego, CA 92121
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human OXCT1 Protein
Catalog Number: hRP-1735
Manufacturer: LD Biopharma, Inc.

Introduction

Human succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial (OXCT1) gene encodes a member of the 3-oxoacid CoA-transferase gene family. The encoded protein is a homodimeric mitochondrial matrix enzyme that plays a central role in extrahepatic ketone body catabolism by catalyzing the reversible transfer of coenzyme A from succinyl-CoA to acetoacetate. Mutations in this gene are associated with succinyl CoA:3-oxoacid CoA transferase deficiency. It has been demonstrated that anti-OXCT1 auto-antibody could be detected in some auto-immuno-disease patients blood samples.

Full-length mature human OXCT1 cDNA (40 - 520aa, derived from BC009001) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: OXCT1 (OXCT; SCOT)
Accession Number: NP_000427.1
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

E Croze, et al., *Interferon-beta-1b-induced short-and long-term signature of treatment activity in multiple sclerosis*. The Pharmacogenomics Journal 13, 443-451 (2013)



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Fukao T, et al., *Clinical and molecular characterization of five patients with succinyl-CoA:3-ketoacid CoA transferase (SCOT) deficiency*. *Biochim. Biophys. Acta* 1812 (5), 619-624 (2011)

Maurer GD, et al., *Differential utilization of ketone bodies by neurons and glioma cell lines: a rationale for ketogenic diet as experimental glioma therapy*. *BMC Cancer* 11, 315 (2011)

Applications

1. May be used for in vitro OXCT1 mediated extrahepatic ketone body catabolism regulation study for cancer cells with “ProFectin” reagent based intracellular delivery of this protein.
2. May be used for OXCT1 protein-protein interaction assay.
3. May be used as auto-antibodies detection reagent, which will react with sera of some auto-immuno-diseases’s patients.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGFEGSTSTKFYTD PVEAVKDI PDGATV L VGGFGLCGIP
ENLIDALLKTGVKGLTAVSNNAGVDNFG LGLLLRSKQIKRMVSSYVGENAEFERQYLSGELEVE
LTPQGT LAERIRAGGAGVPAFYTPTGYGTLVQEGGSP IKYNKDG SVAIASKPREVREFNGQHF I
LEEAITGDFALVKAWKADRAGNVI FRKSARNFNLP MCKAAETT VVEVEE IVDIGAFAPEDIHIP
QIYVHRLIKGEKYEKRIERLSIRKEGDGEAKSAKPGDDVRERI IKRAALEFEDGMYANLGIGIP
LLASNFISP NITVHLQSENGVLGLGPYPRQHEADADLINAGKETVTILPGASFFSSDES FAMIR
GGHVDLTMLGAMQVSKYGD LANWMI PGK MVKGMGGAMD LVSSAKTKVVVTMEHSAKGN AHKIME
KCTLPLTGKQCVNRI I TEKAVFDVDK KGLTLIELWEGLTVDDVQKSTGCDFAVSPKLMPMQQI
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