

# Recombinant Human ACOX1/aox Protein (His Tag)

Catalog Number:PKSH031175



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

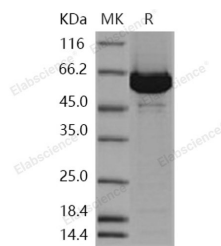
## Description

<b>Synonyms</b>	ACOX;PALMCOX;SCOX
<b>Species</b>	Human
<b>Expression Host</b>	Baculovirus-Insect Cells
<b>Sequence</b>	Met 1-Leu 660
<b>Accession</b>	AAH08767.1
<b>Calculated Molecular Weight</b>	76.7 kDa
<b>Observed molecular weight</b>	60 kDa
<b>Tag</b>	N-His

## Properties

<b>Purity</b>	> 85 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.0, 20% glycerol, 3mM DTT Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed m
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 85 % as determined by reducing SDS-PAGE.

## Background

Peroxisomal acyl-coenzyme A oxidase 1 (ACOX1 or AOX) is the first enzyme of the fatty acid beta-oxidation pathway and belongs to the Acyl-CoA oxidase family. Human liver peroxisomes contain two acyl-CoA oxidases, namely, palmitoyl-CoA oxidase (ACOX1/AOX) and a branched chain acyl-CoA oxidase. The palmitoyl-CoA oxidase (ACOX1/AOX) oxidizes the CoA esters of straight chain fatty acids and prostaglandins and donates electrons directly to molecular oxygen, thereby producing H<sub>2</sub>O<sub>2</sub>. Human ACOX1/AOX is a protein of 661-amino acids, including the carboxyl-terminal sequence (Ser-Lys-Leu) known as a minimal peroxisome-targeting signal. Human ACOX1/AOX, the first and rate-limiting enzyme of the peroxisomal β-oxidation pathway, has two isoforms including ACOX1a and ACOX1b, transcribed

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from a single gene. The human ACOX1b isoform is more effective than the ACOX1a isoform in reversing the Acox1 null phenotype in the mouse partly because of the Substrate utilization differences.

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