

Recombinant Human ACOX1/aox Protein (His Tag)

Catalog No. PKSH031175

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

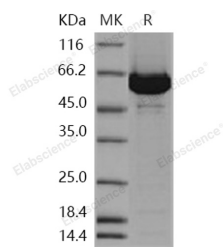
Description

Synonyms	ACOX;PALMCOX;SCOX
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Met 1-Leu 660
Accession	AAH08767.1
Calculated Molecular Weight	76.7 kDa
Observed molecular weight	60 kDa
Tag	N-His
Bioactivity	Not validated for activity

Properties

Purity	> 85 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	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.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.0, 20% glycerol, 3mM DTT Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	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

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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 H₂O₂. 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 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.