



Recombinant Protein Technical Manual
Recombinant Human ACOX1/aox Protein (His Tag)
RPES1617

Product Data:

Product SKU: RPES1617

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: AAH08767.1

Protein Information:

Molecular Mass: 76.7 kDa

AP Molecular Mass: 60 kDa

Tag: N-His

Bio-activity:

Purity: > 85 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: 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% gly, 3mM DTT

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: ACOX;PALMCOX;SCOX

Immunogen Information:

Sequence: Met 1-Leu 660

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 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.