Acyl-Coenzyme A Oxidase 4, Peroxisomal (ACX4) Arabidopsis Thaliana Recombinant Protein

PRODUCT OVERVIEW

Product Name	Acyl-coenzyme A oxidase 4, peroxisomal (ACX4), Recombinant Protein
Full Product Name	Recombinant Arabidopsis thaliana Acyl-coenzyme A oxidase 4, peroxisomal (ACX4)
Product Gene Name	ACX4 recombinant protein
Product Synonym Gene Name	ACX4
Sequence	MAVLSSADRA SNEKKVKSSY FDLPPMEMSV AFPQATPAST FPPCTSDYYH FNDLLTPEEQ AIRKKVRECM EKEVAPIMTE YWEKAEFPFH ITPKLGAMGV AGGSIKGYGC PGLSITANAI ATAEIARVDA SCSTFILVHS SLGMLTIALC GSEAQKEKYL PSLAQLNTVA CWALTEPDNG SDASGLGTTA TKVEGGWKIN GQKRWIGNST FADLLIIFAR NTTTNQINGF IVKKDAPGLK ATKIPNKIGL RMVQNGDILL QNVFVPDEDR LPGVNSFQDT SKVLAVSRVM VAWQPIGISM GIYDMCHRYL KERKQFGAPL AAFQLNQQKL VQMLGNVQAM FLMGWRLCKL YETGQMTPGQ ASLGKAWISS KARETASLGR ELLGGNGILA DFLVAKAFCD LEPIYTYEGT YDINTLVTGR EVTGIASFKP ATRSRL
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	47,557 Da
Sequence Positions	1-436, Full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q96329
Species	Arabidopsis thaliana (Mouse-ear cress)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for ACX4 recombinant protein	MBS1317716 is a recombinant protein targeting ACX4. Also known as Recombinant Arabidopsis thaliana Acyl-coenzyme A oxidase 4, peroxisomal (ACX4). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of ACX4 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ACX4. It may not necessarily be applicable to this product.

NCBI GI #	15231059
NCBI GeneID	824347
NCBI Accession #	NP_190752.1

UniProt Primary Accession #	Q96329
UniProt Related Accession #	Q96329
GenBank Nucleotide #	NM_115043.3
NCBI Official Full Name	acyl-CoA oxidase 4
NCBI Official Symbol	ACX4
NCBI Official Synonym Symbols	acyl-CoA oxidase 4; ATG6; ATSCX; SHORT-CHAIN ACYL COA OXIDASE
UniProt Protein Name	Acyl-coenzyme A oxidase 4, peroxisomal
UniProt Synonym Protein Names	G6p; Short-chain acyl-CoA oxidase; AtCX4; AtG6; SAOX
Protein Family	Acyl-coenzyme A oxidase
UniProt Gene Name	ACX4
UniProt Synonym Gene Names	G6; AOX 4; AtCX4; AtG6; SAOX
NCBI Protein Information	acyl-CoA oxidase 4
NCBI Summary for ACX4	Encodes a short-chain acyl-CoA oxidase, which catalyzes the first step of peroxisomal fatty acid beta-oxidation during early, post-germinative growth in oilseed species. Null mutants virtually lack short-chain acyl-CoA and are resistant to 2,4-dichlorophenoxybutyric acid, which is converted to the herbicide and auxin analogue 2,4-dichlorophenoxyacetic acid by beta-oxidation. Despite the almost complete loss of short-chain activity, lipid catabolism and seedling growth and establishment was unaltered in the acx4 mutant. However, double mutants in acx3acx4 (acx3 encodes medium chain acyl CoA oxidase) were not viable and arrested during embryogenesis.
UniProt Comments for ACX4	Catalyzes the desaturation of short-chain acyl-CoAs to 2-trans-enoyl-CoAs. Active on butyryl-CoA (C4), hexanoyl-CoA (C6), and octanoyl-CoA (C8). Has no activity as acyl-CoA dehydrogenase or on crotonyl-CoA (an unsaturated C4:1 carbocyclic ester) or glutaryl-CoA (a dicarboxylic ester).
Research Articles on ACX4	**1.** Data show that acx3acx4 Columbia (Col) and acx1acx3acx4 (Col) mutants are viable and that enzyme activity in these mutants is significantly reduced on a range of substrates compared to wild type.
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