

Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-110889-1 EN DE

LAST UPDATED: 01 SEP 2016

General information

Name of genetic element

1-acyl-sn-glycerol-3-phosphate acyltransferase coding sequence

EN

Alternate genetic element name(s) (synonym(s))

Lysophosphatidic acid acyltransferase

EN

1-acylglycerol-3-phosphate O-acyltransferase

EN

1-acyl-sn-glycerol-3-phosphate 2-O-acyltransferase

EN

1-acyl-sn-glycero-3-phosphate acyltransferase

EN

1-acylglycerolphosphate acyltransferase

EN

1-acylglycero-3-phosphate acyltransferase

EN

Abbreviation

CS-Ipaat-LIMDO

EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

BCH-ORGA-SCBD-110870-2 ORGANISM | LIMNANTHES DOUGLASII (DOUGLAS' MEADOWFOAM ,
POACHED EGG PLANT, LIMDO) |

Ornamentals

Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

Lysophosphatidic acid acyltransferase

EN

Biological function of the protein

The lysophosphatidic acid acyltransferase gene from *Limnanthes douglasii* catalyses the linkage of erucic acid to the sn-2 position of lysophosphatidic acid.

EN

Expression of LPAAT in the seeds of genetically modified oilseed rape leads to significantly increased levels of the triglyceride Trierucin.

Related trait(s) or use(s) in biotechnology

Changes in quality and/or metabolite content

Lipid and fatty acids

Additional Information

Other relevant website addresses and/or attached documents

- ? [Lysophosphatidic acid acyltransferase from meadowfoam mediates insertion of erucic acid at the sn-2 position of triacylglycerol in transgenic rapeseed oil. \(English \)](#)
- ? [Identification of a cDNA that encodes a 1-acyl-sn-glycerol-3-phosphate acyltransferase from *Limnanthes douglasii* \(English \)](#)
- ? [*Limnanthes douglasii* lysophosphatidic acid acyltransferases: immunological quantification, acyl selectivity and functional replacement of the *Escherichia coli* *plsC* gene \(English \)](#)

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Further Information

Questions about the Cartagena Protocol on Biosafety or the operation of the Biosafety Clearing-House may be directed to the Secretariat of the Convention on Biological Diversity.

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on Biological Diversity**

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