GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-110931-1

LAST UPDATED: 26 SEP 2016

General information

Name of genetic element

Acyl-lipid Δ12-desaturase coding sequence | EN

Abbreviation

CS-desA-SYNYX | EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

BCH-ORGA-SCBD-102157-6 ORGANISM | SYNECHOCYSTIS SP. (CYANOBACTERIA, SYNYX) | Bacteria

Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

Acyl-lipid Δ12-desaturase | EN

Biological function of the protein

Acyl-lipid desaturases introduce double bonds into fatty acid moieties that have been esterified to glycerolipids, which are located in the endoplasmic reticulum, the chloroplast membrane in plant cells and the thylakoid membrane in cyanobacterial cells. This type desaturase is the most efficient regulator of the unsaturation level of membrane lipids in response to temperature change

In transgenic plants acyl-lipid Δ12-desaturase expression increases their tolerance to prolonged exposure of low positive temperatures and ensures resistance to fungal pathogens and wounding. | EN

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

Resistance to diseases and pests

Fungi

Tolerance to abiotic stress

Cold / Heat

Additional Information

Other relevant website addresses and/or attached documents

? Acyl-lipid Δ12-desaturase of the cyanobacterium increases the unsaturation degree in transgenic potato *(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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