

## Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-103620-2

LAST UPDATED: 27 JUL 2012

### General information

Name of genetic element

Phytoene Synthase 1 gene

EN

Abbreviation

CS-PSY1

EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

### Donor organism

Donor organism(s)

[BCH-ORGA-SCBD-246-6](#) ORGANISM | ZEA MAYS (MAIZE, CORN, MAIZE) |

Crops

### Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

Phytoene Synthase 1

EN

Biological function of the protein

Phytoene synthase is a transferase enzyme involved in the biosynthesis of carotenoids. It catalyzes the conversion of geranylgeranyl pyrophosphate to phytoene

EN

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

Changes in quality and/or metabolite content  
Vitamins

### Additional Information

Sequence originating from the corn EST cfp3n.pk008.p15.fis

EN

Other relevant website addresses and/or attached documents

? [Carotenoids 2: Genetics and molecular biology of carotenoid pigment biosynthesis.pdf](#) ( *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.

**Secretariat of the Convention  
on Biological Diversity**

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