

Title (en)

GENES ENCODING CAROTENOID COMPOUNDS

Title (de)

CAROTINOIDVERBINDUNGEN CODIERENDE GENE

Title (fr)

GENES CODANT DES COMPOSES CAROTENOIDES

Publication

EP 1646713 A2 20060419 (EN)

Application

EP 04778321 A 20040714

Priority

- US 2004022747 W 20040714
- US 48818303 P 20030717
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Abstract (en)

[origin: WO2005010156A2] A carotenogenic biosynthetic gene cluster has been isolated from *Pantoea stewartii* strain DC413, wherein the genetic organization of the cluster is crtE-idi-crtX-crtY-crtI-crtB-crtZ. The genes contained within this cluster encode geranylgeranyl pyrophosphate (GGPP) synthetase (CrtE), isopentenyl pyrophosphate isomerase (Idi), zeaxanthin glucosyl transferase (CrtX), lycopene cyclase (CrtY), phytoene desaturase (CrtI), phytoene synthase (CrtB), and b-carotene hydroxylase (CrtZ). The gene cluster, genes and their products are useful for the conversion of farnesyl pyrophosphate to carotenoids. Vectors containing those DNA segments, host cells containing the vectors and methods for producing those enzymes by recombinant DNA technology in transformed host organisms are disclosed.

IPC 1-7

C12N 1/00

IPC 8 full level

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IPC 8 main group level

C12N (2006.01)

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Citation (search report)

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