

Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-110471-2

LAST UPDATED: 08 FEB 2017

General information

Name of genetic element

Dihydroflavonol-4-reductase

EN

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

NADPH-dihydromyricetin reductase

EN

Dihydroquercetin reductase

EN

Dihydrokaempferol 4-reductase

EN

Flavanone 4-reductase

EN

Cis-3,4-leucopelargonidin:NADP+ 4-oxidoreductase

EN

Dihydromyricetin reductase

EN

Abbreviation

CA-DFR-ROSHC

EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

[BCH-ORGA-SCBD-43795-5](#) ORGANISM | ROSA HYBRIDA (ROSE, ROSHC) |

Ornamentals

Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

Dihydroflavonol-4-reductase

EN

Biological function of the protein

The gene encodes dihydroflavonol reductase functions in the biosynthesis of pelargonidin-based anthocyanins in roses.

EN

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

Changes in quality and/or metabolite content
Flavonoids (e.g. anthocyanin)
Pigmentation / Coloration

Additional Information

Other relevant website addresses and/or attached documents

? [Engineering of the Rose Flavonoid Biosynthetic Pathway Successfully Generated Blue-Hued Flowers Accumulating Delphinidin](#) (*English*)

? [Molecular Cloning and Characterization of Rosa hybrida Dihydroflavonol 4-reductase Gene](#) (*English*)

? [Dihydrokaempferol 4-reductase - Wikipedia](#) (*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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