GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-101416-6

LAST UPDATED: 22 JUN 2021

General information

Name of genetic element

Ti plasmid right border repeat | EN

Abbreviation

V-RB-RHIRD | EN

Category

Other (Plasmid vector)

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

BCH-ORGA-SCBD-12081-6 ORGANISM | AGROBACTERIUM TUMEFACIENS (AGROBACTERIUM) | Bacteria

Characteristics of the protein coding sequence

Additional Information

The left border (LB) and right border (RB) of the Ti plasmid (tumour-inducing plasmid) are the signals that flank the T-DNA (transferred DNA) which is introduced into the plant genome upon being infected by the soil bacterium Agrobacterium tumefaciens.

When used in modern biotechnology for the development of LMOs, the virulent genes naturally occurring in Agrobacterium tumefaciens between the LB and RB are replaced by a DNA cassette containing the gene(s) of interest. Therefore, when a plant is transformed using Agrobacterium tumefaciens, the T-DNA containing the cassette with gene(s) of interest is integrated into the plant's genome.

EN

Other relevant website addresses and/or attached documents

? GMO Safety: using a soil bacterium as a gene transporter *(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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