GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-14985-12

LAST UPDATED: 27 FEB 2014

General information

Name of genetic element

| Cry1Ab | EN |

Abbreviation

| CS-Cry1Ab-BACTU | EN |

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

BCH-ORGA-SCBD-45614-11 ORGANISM | BACILLUS THURINGIENSIS (BT, BACILLUS, BACTU)
Bacteria

Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

| Cry1Ab delta-endotoxin | EN |

Biological function of the protein

| The *cry1Ab* gene codes for a delta-endotoxin, commonly known as "Bt-toxin", which confers resistance to the plant to lepidoptera larvae such as the European corn borer (*Ostrinia nubilalis*), the southwestern corn borer (*Diatraea grandiosella*), pink borer (*Sesamia cretica*), Spruce Budworm, Tent caterpillar, Gypsy moth, Diamondback moth, Cabbage looper, Tobacco budworm, and Cabbage worm. | EN |

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

Resistance to diseases and pests
　　　Insects
　　　　　Lepidoptera (butterflies and moths)

Additional Information

Cry proteins, of which Cry1Ab is only one, act by selectively binding to specific sites localized on the lining of the midgut of susceptible insect species. Following binding, pores are formed that disrupt midgut ion flow, causing gut paralysis and eventual death due to bacterial sepsis. Cry1Ab is lethal only when eaten by the larvae of lepidopteran insects (moths and butterflies), and its specificity of action is directly attributable to the presence of specific binding sites in the target insects.

EN

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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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