

Biosafety Clearing-House (BCH)

LIVING MODIFIED ORGANISM (LMO)


BCH-LMO-SCBD-110062-1

[? Decisions on the LMO ? Risk Assessments](#)

LAST UPDATED: 08 APR 2016

Living Modified Organism identity


The image below identifies the LMO through its unique identifier, trade name and a link to this page of the BCH. Click on it to download a larger image on your computer. For help on how to use it go to the LMO quick-links page.



MON-87751-7
Insect resistant soybean

CBD

<https://bch.cbd.int/database/record?documentID=110062>



Read barcode or type above URL into internet browser to access information on this LMO in the Biosafety Clearing-House © SCBD 2012

Name

Insect resistant soybean

EN

Transformation event

MON87751

Unique identifier

MON-87751-7

Developer(s)

- [PERSON: MONSANTO](#) | [BCH-CON-NZ-199-1](#)

PERSON

Monsanto

Description

Soybean was modified with the insertion of the Cry1A.105 and Cry2Ab2 proteins which provide protection from feeding damage caused by targeted lepidopteran pests, such as primary target pests velvetbean caterpillar (*Anticarsia gemmatilis*), soybean looper (*Pseudoplusia includens*), soybean anvil borer (*Epinotia aporema*), and sunflower looper (*Rachiplusia nu*).

EN

Recipient Organism or Parental Organisms

The term "Recipient organism" refers to an organism (either already modified or non-modified) that was subjected to genetic modification, whereas "Parental organisms" refers to those that were involved in cross breeding or cell fusion.

BCH-ORGA-SCBD-10453-6 ORGANISM | GLYCINE MAX (SOYBEAN, SOYA BEAN, SOYA, SOYBN) |
Crops

Related LMO(s)

BCH-LMO-SCBD-103079-11 | MON-877Ø1-2 - Insect resistant soybean | Resistance to diseases and pests - Insects - Lepidoptera (butterflies and moths)
[Show detection method\(s\)](#)

Characteristics of the modification process

Vector

PV-GMIR13196

EN

Techniques used for the modification

Agrobacterium-mediated DNA transfer

Genetic elements construct

P-Act2 1.207 kb	TP-ctp2-ARATH 0.227 kb	CS-Cry2Ab2-BACTU 1.904 kb	T-Mt-ORYSA 0.299 kb
P-rbcS-ARATH 1.722 kb	TP-rbcS 0.263 kb	CS-cry1A_105-SYNTH 3.533 kb	T-Pt1-MEDTR 0.399 kb

Introduced or modified genetic element(s)

Some of these genetic elements may be present as fragments or truncated forms. Please see notes below, where applicable.

BCH-GENE-SCBD-43771-9 CRY1A.105 | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU |
Protein coding sequence | Resistance to diseases and pests (Insects, Lepidoptera (butterflies and moths))

BCH-GENE-SCBD-14988-7 CRY2AB2 | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU |
Protein coding sequence | Resistance to diseases and pests (Insects, Lepidoptera (butterflies and moths))

BCH-GENE-SCBD-104517-1 ACTIN 2 GENE PROMOTER | (THALE CRESS) |
Promoter

BCH-GENE-SCBD-100365-6 CHLOROPLAST TRANSIT PEPTIDE 2 | (THALE CRESS) |
Transit signal

BCH-GENE-SCBD-110059-1 METALLOTHIONEIN-LIKE GENE TERMINATOR | (RICE) |
Terminator

BCH-GENE-SCBD-103851-5 RBCS PROMOTER | (THALE CRESS) |
Promoter

BCH-GENE-SCBD-101902-4 RBCS TRANSIT PEPTIDE | (THALE CRESS) |
Transit signal

BCH-GENE-SCBD-110061-1 PHOSPHATE TRANSPORTER GENE TERMINATOR | (BARRELCLOVER, STRONG-SPINED MEDICK, BARREL MEDIC, BARREL MEDICK, MEDTR) |
Terminator

Notes regarding the genetic elements present in this LMO

PV-GMIR13196 contains two separate T-DNAs that are each delineated by left and right border regions. The first T-DNA, designated as T-DNA I, contains the cryIA.105 and cry2Ab2 expression cassettes, with genetic elements as indicated above.

The second T-DNA, designated as T-DNA II, contains marker genes that allow for simplified selection of transformed tissue. During transformation, both T-DNAs were inserted into the soybean genome. Subsequently, traditional breeding, segregation, selection and screening were used to isolate those plants that contain the cryIA.105 and cry2Ab2 expression cassettes and do not contain the marker gene expression cassettes.

Characterization of the DNA insert in MON 87751 was conducted using a combination of sequencing, PCR, and bioinformatics. The results of this characterization demonstrate that MON 87751 contains one copy of T-DNA I containing the cry1A.105 and cry2Ab2 expression cassettes that is stably integrated at a single locus and is inherited according to Mendelian principles over multiple generations. No vector backbone sequences were detected.

LMO characteristics

Modified traits

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

Common use(s) of the LMO

Food

Additional Information

Other relevant website addresses and/or attached documents

- ? [MON-87751-7 - APHIS \(English \)](#)
- ? [MON-87751-7 - ISAAA \(English \)](#)
- ? [MON-87751-7 - GMO Compass \(English \)](#)

[BCH-LMO-SCBD-110062-1](#)

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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