

Biosafety Clearing-House (BCH)

LIVING MODIFIED ORGANISM (LMO)


BCH-LMO-SCBD-105046-2

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

LAST UPDATED: 17 AUG 2017

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.



DAS-81419-2
Conkesta™ Soybean

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

<https://bch.cbd.int/database/record?documentID=105046>



Name

Conkesta™ Soybean

EN

Transformation event

DAS-81419-2

Unique identifier

DAS-81419-2

Developer(s)

- [ORGANIZATION: DOW AGROSCIENCES](#) | [BCH-CON-SCBD-14939-1](#)

ORGANIZATION

Dow AgroSciences

Website: <http://www.dowagro.com/homepage/index.htm>

Description

Soy line DAS-81419-2 was transformed with the insertion of Cry1F and Cry1Ac to confer resistance to lepidopteran insects as well as the insertion of the pat gene which results in the synthesis of phosphinothricin N-acetyltransferase thus conferring tolerance to glufosinate herbicides.

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

Point of collection or acquisition of the recipient organism or parental organisms

Cultivar: Maverick

EN

Characteristics of the modification process

Vector

pDAB9582

EN

Techniques used for the modification

Agrobacterium-mediated DNA transfer

Genetic elements construct

P-ubi10-ARATH 1.322 kb	CS-cry1F-BACTU 3.447 kb	T-ORF23-RHIRD 0.457 kb
----------------------------------	-----------------------------------	----------------------------------

P-XYZ-CsVMV 0.517 kb	CS-cry1Ac-BACTU 3.471 kb	T-ORF23-RHIRD 0.475 kb
--------------------------------	------------------------------------	----------------------------------

P-XYZ-CsVMV 0.517 kb	CS-pat-STRVR 0.552 kb	T-ORF1-RHIRD 0.704 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-104802-5 POLYUBIQUITIN10 GENE PROMOTER | (THALE CRESS) |
Promoter

BCH-GENE-SCBD-14987-8 CRY1F | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU |
Protein coding sequence | Resistance to diseases and pests (Insects, Lepidoptera (butterflies and moths))

BCH-GENE-SCBD-104806-3 ORF23 3' UNTRANSLATED REGION |
Terminator

BCH-GENE-SCBD-101900-5 CSVMV PROMOTER |
Promoter

BCH-GENE-SCBD-14986-6 CRY1AC | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU |
Protein coding sequence | Resistance to diseases and pests (Insects, Lepidoptera (butterflies and moths))

BCH-GENE-SCBD-15002-4 PHOSPHINOTHRICIN N-ACETYLTRANSFERASE GENE |
Protein coding sequence | Resistance to herbicides (Glufosinate)

BCH-GENE-SCBD-104807-2 ORF1 3' UNTRANSLATED REGION |
Terminator

Notes regarding the genetic elements present in this LMO

The Cry1Ac and Cry1F sequences are synthetic versions of the native genes.

EN

The cry1Fv3 gene is comprised of three parts; at the 5' end, a toxin core that was optimized from the native cry1Fa2 gene originally isolated from *Bacillus thuringiensis* subsp. *aizawai* strain PS811; in the middle, a very small portion of cry1Ca3 which was originally isolated from *B. thuringiensis* subsp. *aizawai* strain PS811; and at the 3' end, a tail that was optimized from the native cry1Ab1 tail originally isolated from *B. thuringiensis* subsp. *Berliner* 1715. The cry1Fv3 gene encodes the Cry1F protein that is comprised of 1148 amino acids and has a molecular weight of ~130.2 kDa. The amino acid sequence of the Cry1F protein is identical to that expressed in cotton event DAS-24236-5.

The cry1Ac(synpro) gene is comprised of three parts; at the 5' end, a toxin core that was optimized from the native cry1Ac1 gene originally isolated from *B. thuringiensis* subsp. *kurstaki* strain HD73; in the middle, a very small portion of cry1Ca3 which was originally isolated from *B. thuringiensis* subsp. *aizawai* strain PS811; and at the 3' end, a tail that was optimized from the native cry1Ab1 tail originally isolated from *B. thuringiensis* subsp. *Berliner* 1715. The cry1Ac(synpro) gene encodes the Cry1Ac protein that is comprised of 1156 amino acids and has a molecular weight of ~130.7 kDa. The cry1Ac(synpro) gene sequence and the corresponding Cry1Ac amino acid sequence are identical to that expressed in cotton event DAS-21023-5

Molecular characterization by Southern blot analyses of DAS-81419-2 soybean confirmed that a single, intact DNA insert containing the cry1Ac, cry1F, and pat gene expression cassettes was integrated into the soybean genome and the intact DNA insert was stably inherited in the five breeding generations tested. Southern blot analyses confirmed the absence of the plasmid backbone DNA in DAS-81419-2 soybean.

LMO characteristics

Modified traits

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

Common use(s) of the LMO

Food
Feed

Additional Information

Other relevant website addresses and/or attached documents

? [DAS-81419-2 - APHIS](#) (English)
? [DAS-81419-2 - ISAAA](#) (English)

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**

413 rue Saint-Jacques, suite 800
Montreal, Québec, H2Y 1N9
Canada

Fax: +1 514 288-6588

Email: secretariat@cbd.int