

Biosafety Clearing-House (BCH)

LIVING MODIFIED ORGANISM (LMO)


BCH-LMO-SCBD-104683-5

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

LAST UPDATED: 22 JAN 2014


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-87705-6
Vistive Gold™ Soybean

<https://bch.cbd.int/database/record?documentID=104683>



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

Name

Vistive Gold™ Soybean

EN

Transformation event

MON 87705

Unique identifier

MON-87705-6

Developer(s)

- [ORGANIZATION: MONSANTO](#) | [BCH-CON-SCBD-14925-3](#)

ORGANIZATION

Monsanto
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St. Louis, MO
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Website: <http://www.monsanto.com>

Description

The modified fatty acid profile in MON 87705 soybean oil is achieved through the use of endogenous soybean (*Glycine max* L.) gene segments configured to suppress FATB and FAD2 gene expression. MON 87705 contains FATB1-A and FAD2-1A gene segments under the control of a seed promoter, limiting oil composition modification to this tissue.

EN

The assembled gene transcript has an inverted repeat that produces double stranded RNA (dsRNA) that, via the RNA interference (RNAi) pathway, suppresses endogenous FATB and FAD2 gene expression, thereby producing the desired fatty acid phenotype

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

Characteristics of the modification process

Vector

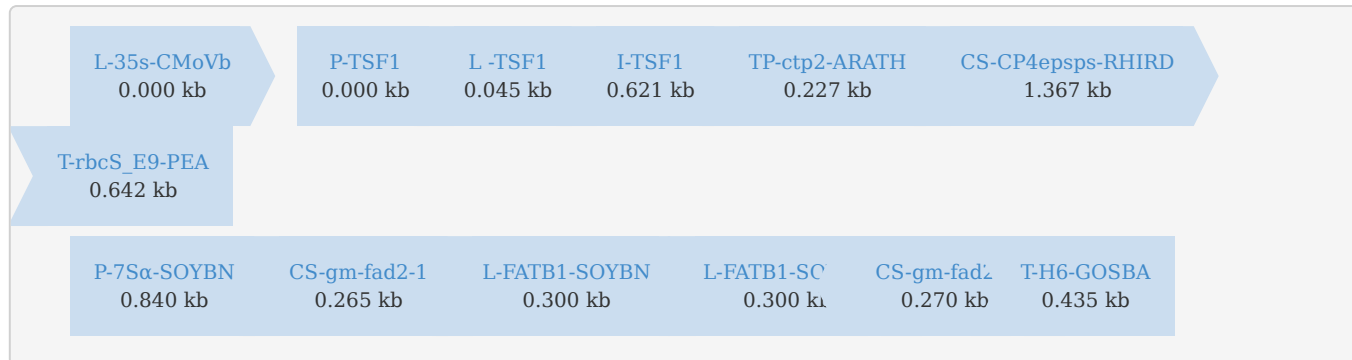
PV-GMPQ/HT4404

EN

Techniques used for the modification

Agrobacterium-mediated DNA transfer

Genetic elements construct



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-14979-7 5-ENOLPYRUVYLSHIKIMATE-3-PHOSPHATE SYNTHASE GENE |
Protein coding sequence | Resistance to herbicides (Glyphosate)

BCH-GENE-SCBD-100267-2 DELTA(12)-FATTY ACID DEHYDROGENASE | (SOYBEANS) |
Protein coding sequence | Changes in quality and/or metabolite content (Lipid and fatty acids)

BCH-GENE-SCBD-104682-2 PALMITOYL ACYL CARRIER PROTEIN THIOESTERASE 5'UTR | (SOYBEANS) |
Leader

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

BCH-GENE-SCBD-101877-5 RBCS-E9 GENE TERMINATOR | (GARDEN PEA) |
Terminator

BCH-GENE-SCBD-104359-2 A' SUBUNIT OF B-CONGLYCININ GENE PROMOTER | (SOYBEANS) |
Promoter

BCH-GENE-SCBD-104689-2 H6 GENE 3'UTR | (SEA-ISLAND COTTON, EGYPTIAN COTTON) |

Terminator

BCH-GENE-SCBD-103903-1 ELONGATION FACTOR EF-1ALPHA PROMOTER | (THALE CRESS) |

Promoter

BCH-GENE-SCBD-103904-1 ELONGATION FACTOR EF-1ALPHA LEADER | (THALE CRESS) |

Leader

BCH-GENE-SCBD-103905-1 ELONGATION FACTOR EF-1ALPHA INTRON 1 | (THALE CRESS) |

Intron

BCH-GENE-SCBD-105196-2 FMV 35S ENHANCER |

Leader

Notes regarding the genetic elements present in this LMO

The PV-GMPQ/HT4404 vector contains two T-DNAs, each delineated by left and right border regions.

T-DNA I contains a a codon optimised cp4 epsps expression cassette and a partial suppression cassette. The cp4 epsps expression cassette is under the regulation of FMV/Tsf1 chimeric promoter (1.039 kbp) and E9 polyadenylation sequence. The partial suppression cassette in T-DNA I contains the sense segments of the FAD2-1A intron and FATB1-A 5' UTR, including the chloroplast targeting sequence, which are under the regulation of the seed 7Sα' promoter.

T-DNA II contains a partial suppression cassette, which consists of the antisense segment of FAD2-1A intron and FATB1-A 5' UTR that is flanked by the H6 untranslated sequence.

During plant transformation, a portion of the plants that were generated contained the two T-DNAs co-integrated at one locus in the soybean genome creating a DNA insert that contains a cp4 epsps cassette and a single FAD2-1A and FATB1-A suppression cassette.

EN

LMO characteristics

Modified traits

Resistance to herbicides

Glyphosate

Changes in quality and/or metabolite content

Lipid and fatty acids

Common use(s) of the LMO

Food

Feed

Detection method(s)

External link(s)

? [Event-specific Method for the Quantification of Soybean MON 87705 Using Real-time PCR](#) (*English*

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Additional Information

Other relevant website addresses and/or attached documents

? [MON-87705-6 - APHIS](#) (*English*)

? [MON-87705-6 - GMO Compass](#) (*English*)

? [MON-87705-6 - EFSA](#) (*English*)

[BCH-LMO-SCBD-104683-5](#)

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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