

Biosafety Clearing-House (BCH)

LIVING MODIFIED ORGANISM (LMO)

BCH-LMO-SCBD-101800-7

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

LAST UPDATED: 24 JUL 2013

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.



<https://bch.cbd.int/database/record?documentID=101800>

DAS-Ø15Ø7-1 X MON-ØØ81Ø-6 X MON-ØØ6Ø3-6

Maize resistant to Lepidoptera and tolerant to glufosinate and glyphosate herbicides



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

Name

Maize resistant to Lepidoptera and tolerant to glufosinate and glyphosate herbicides

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Transformation event

TC1507 x MON810 x NK603

Unique identifier

DAS-Ø15Ø7-1 x MON-ØØ81Ø-6 x MON-ØØ6Ø3-6

Developer(s)

- **ORGANIZATION:** DU PONT KABUSHIKI KAISHA | [BCH-CON-JP-8195-2](#)

ORGANIZATION

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Description

A stacked maize line DAS-Ø15Ø7-1, MON-ØØ81Ø-6, MON-ØØ6Ø3-6 obtained through conventional breeding of the TC1507, MON810 and NK603. The modifications in these lines confer tolerance to the glyphosate and glufosinate herbicides and resistance to Lepidoptera

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and European Corn Borer pests.

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-246-6 ORGANISM | ZEA MAYS (MAIZE, CORN, MAIZE) |

Crops

BCH-LMO-SCBD-14776-17 LIVING MODIFIED ORGANISM | MON-ØØ6Ø3-6 - ROUNDUP READY™ MAIZE |

Resistance to herbicides - Glyphosate

BCH-LMO-SCBD-14750-19 LIVING MODIFIED ORGANISM | MON-ØØ81Ø-6 - YIELDGARD™ MAIZE |

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

BCH-LMO-SCBD-14841-13 LIVING MODIFIED ORGANISM | DAS-Ø15Ø7-1 - HERCULEX™ I MAIZE |

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

Characteristics of the modification process

Vector

PV-ZMGT32, PV-ZMBK07, PV-ZMGT10 and PHI8999A

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Techniques used for the modification

Cross breeding

Genetic elements construct

P-act1-ORYSA 0.800 kb	I-1_act1-ORYSA 0.600 kb	TP-ctp2-ARATH 0.200 kb	CS-CP4epsps-RHIRD 1.400 kb	T-nos-RHIRD 0.300 kb
P-e35S-CaMV 0.600 kb	I-hsp70-MAIZE 0.800 kb	TP-ctp2-ARATH 0.200 kb	CS-CP4epsps-RHIRD 1.400 kb	T-nos-RHIRD 0.300 kb
P-e35S-CaMV 0.610 kb	I-hsp70-MAIZE 0.800 kb	CS-Cry1Ab-BACTU 3.460 kb		
P-ubi1-MAIZE 1.980 kb	CS-cry1F-BACTU 1.860 kb	T-orf25-RHIRD 0.720 kb		
P-35S-CaMV 0.550 kb	CS-pat-STRVR 0.550 kb	T-35S-CaMV 0.200 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-14987-8 CRY1F | BACILLUS THURINGIENSIS - BT, BACILLUS, BACTU |

Protein coding sequence | Resistance to diseases and pests (Insects, Lepidoptera (butterflies and moths))

BCH-GENE-SCBD-14985-12 CRY1AB | 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-14979-7 5-ENOLPYRUVYLSHIKIMATE-3-PHOSPHATE SYNTHASE GENE |

Protein coding sequence | Resistance to herbicides (Glyphosate)

BCH-GENE-SCBD-100364-5 RICE ACTIN 1 GENE PROMOTER | (RICE) |

Promoter

BCH-GENE-SCBD-100355-6 RICE ACTIN 1, INTRON | (RICE) |

Intron

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

Transit signal

BCH-GENE-SCBD-100269-8 NOPALINE SYNTHASE GENE TERMINATOR |

Terminator

BCH-GENE-SCBD-100366-6 CAMV ENHANCED 35S PROMOTER |

Promoter

BCH-GENE-SCBD-100359-7 HSP70 INTRON | (MAIZE, CORN) |

Intron

BCH-GENE-SCBD-100362-7 UBIQUITIN GENE PROMOTER | (MAIZE, CORN) |

Promoter

BCH-GENE-SCBD-100363-5 ORF25 POLYA TERMINATOR SEQUENCE |

Terminator

BCH-GENE-SCBD-100287-7 CAMV 35S PROMOTER |

Promoter

BCH-GENE-SCBD-100290-6 CAMV 35S TERMINATOR |

Terminator

Notes regarding the genetic elements present in this LMO

DNA insert from MON810 vector PV-ZMBK07 and PV-ZMGT10:

The cry1Ab gene, isolated from the common soil bacterium *Bacillus thuringiensis* (Bt), produces the insect control protein Cry1Ab, a delta-endotoxin.

DNA insert from NK603 vector PV-ZMGT32:

59122 x NK603 also contains a form of the plant enzyme

5-enolpyruvylshikimate-3-phosphate synthase (EPSPS) that allows the plant to survive the otherwise lethal application of glyphosate. The glyphosate-tolerant EPSPS gene was isolated from the CP4 strain of the common soil bacterium *Agrobacterium tumefaciens*.

DNA insert from TC1507 vector PHI8999A:

Vector contains the cry1F gene from *Bacillus thuringiensis* to confer resistance to the European corn borer. The vector additionally contains the pat gene to confer tolerance to the glufosinate ammonium herbicide.

For additional information on this LMO, please refer to the records of the parental LMOs.

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LMO characteristics

Modified traits

Resistance to diseases and pests

Insects

Lepidoptera (butterflies and moths)

European corn borer (*Ostrinia nubilalis*)

Resistance to herbicides

Glufosinate

Glyphosate

Common use(s) of the LMO

Food

Feed

Detection method(s)

External link(s)

? [DAS-01507-1 - EU Reference Laboratory for GM Food and Feed \(EURL-GMFF\)](#) (*English*)

? [MON-00810-6 - EU Reference Laboratory for GM Food and Feed \(EURL-GMFF\)](#) (*English*)

? [MON-00603-6 - EU Reference Laboratory for GM Food and Feed \(EURL-GMFF\)](#) (*English*)

Additional Information

Other relevant website addresses and/or attached documents

[DAS-01507-1, MON-00810-6, MON-00603-6 - CERA](#) (*English*)

[BCH-LMO-SCBD-101800-7](#)

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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