Event MON89034

MON89034 is a Bt maize by Monsanto, containing two Bt toxins against Lepidoptera: Cry1A.105 and Cry2Ab2.
According to the agbios database these toxins are against *Ostrinia* species such as European corn borer (ECB, *O. nubilalis*) and Asian corn borer (*O. furnacalis*, and *Diatraea* species such as southwestern corn borer (SWCB) and sugarcane borer, as well as against fall armyworm (*Spodoptera frugiperda*) and corn earworm (*Helicoverpa zea*). Other sources like the German BVL name ECB and Mediterranean Corn Borer (*Sesamia nonagroides*) as target organisms.

In fact Cry1A.105 [1] (also known as CS-cry1A.105 3.53) is not *one* Bt toxin, but a protein comprised of naturally occurring Cry1Ab, Cry1F, and Cry1Ac proteins. The gene cry1A.105 is a chimeric gene comprising of 4 domains from other cry genes previously used in transgenic plants.d

Cry2Ab2 [2] belongs to the class of Cry2Ab toxins that are currently mainly used in Bt cotton plants (for example in Bollgard II cotton). Most studies therefore seem to be done with GM cotton.

MON89034 was transformed using *Agrobacterium tumefaciens* mediation to introduce two transgenic constructs. One of them contained the antibiotic resistance nptII, confering resistance to antibiotics such as kanamycin and neomycin as a selectable marker. Through additional breeding after the transformation nptII was then removed so that the registered event MON89034 does not contain nptII anymore.

Related events: MON89034 x MON88017 [3]
YieldGard VT PRO/RR2 (Event MON89034 x NK603) [4]
authorization status: feed materials/additives
food materials/additives
feed
food
subject to withdrawl and/or bans: none

Genes:

- cry1A.105 [5]
- cry2Ab2 [6]

GM Event:

- MON89034 [7]

Trade name:

- YieldGard VT PRO [8]

Traits:

- IR - lepidoptera [9]

Related application(s): MON89034 for food/feed [10]
MON89034 x NK603 for food/feed [11]
agbios database entry [12]

Biosafety Clearing-House entry [13]
BCH information on Cry1A.105 [1]

Source URL:https://www.testbiotech.org/en/content/event-mon89034

Links
[1] http://bch.cbd.int/database/record-v4.shtml?documentid=43771 [2]
http://bch.cbd.int/database/record-v4.shtml?documentid=43772 [3]
https://www.testbiotech.org/en/content/mon89034-x-mon88017 [4]
https://www.testbiotech.org/en/content/yieldgard-vt-prorr2-event-mon89034-x-nk603 [5]
https://www.testbiotech.org/en/category/genes/cry1a105 [6]
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