

Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-48364-5

LAST UPDATED: 15 FEB 2021

General information

Name of genetic element

Acetohydroxyacid synthase gene

EN

Alternate genetic element name(s) (synonym(s))

Acetolactate synthase gene (ALS)

EN

Abbreviation

CS-ahas-MAIZE

EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

[BCH-ORGA-SCBD-246-6](#) ORGANISM | ZEA MAYS (MAIZE, CORN, MAIZE) |

Crops

Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

Acetohydroxyacid synthase

EN

Biological function of the protein

The acetolactate synthase enzyme (ALS) plays a key role in the biochemical pathways of the branched-chain amino acids leucine, isoleucine and valine. The application of ALS-inhibiting herbicides blocks this synthesis pathway. Lack of the aforementioned amino acids interferes with protein synthesis, causing the plant to die off. This gene encodes a modified acetolactate synthase, which confers tolerance to several acetolactate synthase-inhibiting herbicides such as, for example, sulfonylurea.

EN

Related trait(s) or use(s) in biotechnology

Resistance to herbicides
Sulfonylurea

Additional Information

Other relevant website addresses and/or attached documents

- ? [Sequence of two acetohydroxyacid synthase genes from Zea mays \(English \)](#)
- ? [Acetohydroxyacid Synthase.pdf \(English \)](#)

[BCH-GENE-SCBD-48364-5](#)

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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