

Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-104877-4

LAST UPDATED: 12 FEB 2021

General information

Name of genetic element

Acetohydroxy acid synthase gene

EN

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

Acetolactate synthase gene

EN

ALS

EN

Abbreviation

CS-ahas-ORYSA

EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

[BCH-ORGA-SCBD-10454-5](#) ORGANISM | ORYZA SATIVA (RICE, ORYSA) |
Crops

Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

Acetolactate synthase

EN

Biological function of the protein

AHAS is an essential enzyme for many organisms as it catalyzes the first step in the biosynthesis of the branched-chain amino acids valine, isoleucine, and leucine.

A common mutant form of the ahas gene which differs from the wild type gene by two mutations W548L and S627I results in an enzyme that has tolerance to sulfonylurea herbicides in plants. The ahas mutant isoform may, therefore, be used as a selectable marker

EN

in transgenic plants.

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

Resistance to herbicides
Sulfonylurea

Additional Information

Other relevant website addresses and/or attached documents

? [Acetohydroxyacid synthase and its role in the biosynthetic pathway for branched-chain amino acids.pdf](#) (*English*)

? [UniProtKB - Q6K2E8 \(ILVB1_ORYSJ\)](#) (*English*)

[BCH-GENE-SCBD-104877-4](#)

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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