

Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-115697-1

LAST UPDATED: 01 SEP 2020

General information

Name of genetic element

Cytokinin dehydrogenase 1 signal peptide

EN

Abbreviation

ZmCKX1sp

EN

Category

Transit signal

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

Additional Information

Zea mays cytokinin dehydrogenase 1 (ZmCKX1) signal peptide contains the necessary sequences to direct the transit of the downstream peptide through the endoplasmic reticulum and likely excretion from the cell. In *Zea mays*, the ZmCKX1 protein is found in the apoplast (space between the cell walls and the plasma membrane).

EN

Other relevant website addresses and/or attached documents

? [UniProtKB - Q9T0N8 \(CKX1_MAIZE\)](#) (English)

? [Biochemical characterization of the maize cytokinin dehydrogenase family and cytokinin profiling in developing maize plantlets in relation to the expression of cytokinin dehydrogenase genes.pdf](#) (English)

? [Maize cytokinin dehydrogenase isozymes are localized predominantly to the vacuoles.pdf](#) (English)

? [Subcellular localization and biochemical comparison of cytosolic and secreted cytokinin dehydrogenase from maize.pdf](#) (*English*)

? [The Cytokinin Oxidase-Dehydrogenase CKX1 Is a Membrane-Bound Protein Requiring Homooligomerization in the Endoplasmic Reticulum for Its Cellular Activity.pdf](#) (*English*)

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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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