

Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-15033-8

LAST UPDATED: 10 FEB 2021

General information

Name of genetic element

3"(9)-O-aminoglycoside adenytransferase

EN

Abbreviation

CS-aadA-ECOLX

EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

[BCH-ORGA-SCBD-14930-5](#) ORGANISM | [ESCHERICHIA COLI \(ECOLX\)](#) |

Bacteria

Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

3"(9)-O-aminoglycoside adenylyl transferase

EN

Biological function of the protein

The aadA gene confers resistance to aminoglycoside antibiotics such as spectinomycin and streptomycin. The enzyme adenylates either the 3'-hydroxy on the amino-hexose III ring of streptomycin or the 9-hydroxyl on the actinamine ring of spectinomycin. Typically used as a marker gene.

EN

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

Resistance to antibiotics
Streptomycin

Additional Information

Other relevant website addresses and/or attached documents

? [New plasmid-mediated aminoglycoside adenylyltransferase of broad substrate range that adenylylates amikacin..pdf](#) (*English*)

? [Isolation and characterization of the aadA aminoglycoside-resistance gene from Salmonella choleraesuis](#) (*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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