

Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-107872-1 EN DE

LAST UPDATED: 24 MAR 2015

General information

Name of genetic element

CoA-transferase alpha subunit gene

EN

Abbreviation

CS-ipdA-RHOE1

EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

Donor organism

Donor organism(s)

[BCH-ORGA-SCBD-107871-2](#) ORGANISM | RHODOCOCCLUS EQUI (RHOE1) |

Bacteria

Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

ipdA - CoA-transferase alpha subunit

EN

Biological function of the protein

The gene ipdA (REQ_07170) is an ortholog of rv3551 of Mycobacterium tuberculosis and likewise localized in the cholesterol catabolic gene cluster of its bacterial chromosome of Rhodococcus equi. The encoded protein IpdA (GenBank accession CBH46834) carries the PF01144 signature motif of heterodimeric coenzyme A transferase as well as the COG1788 signature of AtoD, the alpha subunit acetoacetyl-CoA transferase of E. coli. It is thought that IpdA is an alpha subunit of a heterodimeric coenzyme A transferase involved in steroid catabolism, more specific in methylhexahydroindanone propionate degradation. It was shown that the cholesterol catabolism is important for pathogenicity of R. equi.

EN

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

Resistance to diseases and pests

Bacteria

Additional Information

Other relevant website addresses and/or attached documents

? [The steroid catabolic pathway of the intracellular pathogen Rhodococcus equi is important for pathogenesis and a target for vaccine development \(English \)](#)

? [CoA-transferase alpha subunit -GenBank: CBH46238.1 \(English \)](#)

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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.

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on Biological Diversity**

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