

Resource Summary Report

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E. coli MEV15

RRID:Addgene_197112

Type: Plasmid

Proper Citation

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Plasmid Information

URL: <http://www.addgene.org/197112>

Proper Citation: RRID:Addgene_197112

Bacterial Resistance: None

Vector Backbone Description: Vector Backbone:N/A; Vector Types:; Bacterial Resistance:None

Comments: E. coli MEV15 is engineered to host sesquiterpenoid biosynthetic pathways. Sesquiterpenoid production is achieved by supplying the strain with plasmids encoding terpene cyclase and cytochrome P450s under the control of Marionette promoters (See <https://www.addgene.org/kits/marionette-sensor-collection/> and 10.1038/s41589-018-0168-3). Sesquiterpenoid production can be induced by IPTG, vanillic aci, and other inducers controlling cytorhcome P450s. The strain has the upper MEV pathway from pMevT (addgene #17815) inserted into 4418413/4418414, the lower MEV pathway from pMBIS (addgene #17817) and E. coli ispA inserted into 4105665/4105664, the designed redox enzyme array inserteed into 3801913/3801912, and the Marionette cluster from sAJM.1506 (addgene #108254) inserted into 3753777/3752159 of E. coli BL21(DE3)'s genome. The nucleotide numbers are based on NCBI accession # NZ_CP053602. The redox enzyme array consists of fprD/fdxD from Streptomyces avermitilis, fpr/fldA from E. coli, fenr/fer1 from spinach chloroplasts, abd pdr/pdx (camA/camB) from Pseudomonas putida. The Marionette cluster was transferred using phage transduction, resulting in the replacement of nucleotides between 3745758/3839292 by those in the corresponding regions from sAJM.1506 (parent strain: E. coli MG1655), as evident by whole-genome sequencing.

Plasmid Name: E. coli MEV15

Record Creation Time: 20230702T080421+0000

Record Last Update: 20260808T082818+0000

Ratings and Alerts

No rating or validation information has been found for E. coli MEV15.

No alerts have been found for E. coli MEV15.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.