

Resource Summary Report

Generated by [NIF](#) on Aug 4, 2026

pLR16-Phes*

RRID:Addgene_98783

Type: Plasmid

Proper Citation

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Plasmid Information

URL: <http://www.addgene.org/98783>

Proper Citation: RRID:Addgene_98783

Insert Name: pheS

Organism: Bacillus subtilis

Bacterial Resistance: Chloramphenicol

Defining Citation: [PMID:28039138](#)

Vector Backbone Description: Vector Backbone:An pKSV7oriT derivative vector (pBHE261) and pPL2; Vector Types:Bacterial Expression; Bacterial Resistance:Chloramphenicol

Comments: Construction of *Listeria monocytogenes* mutants by allelic exchange has been laborious and time-consuming due to lack of proficient selection markers for the final recombination event, that is, a marker conveying substance sensitivity to the bacteria bearing it, enabling the exclusion of merodiploids and selection for plasmid loss. In order to address this issue, we engineered a counterselection marker based on a mutated phenylalanyl-tRNA synthetase gene (pheS*). This mutation renders the phenylalanine-binding site of the enzyme more promiscuous and allows the binding of the toxic p-chloro-phenylalanine analog (p-Cl-phe) as a substrate. When pheS* is introduced into *L. monocytogenes* and highly expressed under control of a constitutively active promoter, the bacteria become sensitive to p-Cl-phe supplemented in the medium. This enabled us to utilize pheS* as a negative selection marker and generate a novel, efficient suicide vector for allelic exchange in *L. monocytogenes*.

Plasmid Name: pLR16-Phes*

Relevant Mutation: A309G

Record Creation Time: 20220422T222631+0000

Record Last Update: 20260801T082103+0000

Ratings and Alerts

No rating or validation information has been found for pLR16-Phes*.

No alerts have been found for pLR16-Phes*.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 1 mentions in open access literature.

Listed below are recent publications. The full list is available at [NIF](#) .

Pasechnek A, et al. (2020) Active Lysogeny in *Listeria Monocytogenes* Is a Bacteria-Phage Adaptive Response in the Mammalian Environment. *Cell reports*, 32(4), 107956.