

Resource Summary Report

Generated by [PRECISE-TBI](#) on Aug 31, 2026

pZE21-APX(W41F) dimeric

RRID:Addgene_58199

Type: Plasmid

Proper Citation

RRID:Addgene_58199

Plasmid Information

URL: <http://www.addgene.org/58199>

Proper Citation: RRID:Addgene_58199

Insert Name: pea APX W41F

Organism: Synthetic

Bacterial Resistance: Kanamycin

Defining Citation: [PMID:24803433](#)

Vector Backbone Description: Backbone Size:2226; Vector Backbone:pZE; Vector Types:Bacterial Expression; Bacterial Resistance:Kanamycin

Comments: This plasmid encodes the W41F mutant of pea ascorbate peroxidase (APX). The W41F mutation improves enzyme activity. APX W41F is a constitutive homodimer, unlike "APEX", so APX W41F should not be used as a fusion to proteins that are sensitive to dimeric tags. This plasmid encodes APX W41F under a constitutive promoter, and the promoter is flanked by TetR operator sites. When the plasmid is introduced into cells constitutively expressing the TetR protein, such as the GM1655 Pro cells, then the TetR protein binds to the promoter and suppresses transcription. When a tetracycline drug, such as anhydrotetracycline, is added, the TetR protein is displaced from the promoter, allowing transcription of the APX W41F gene. When the plasmid is introduced into bacterial strains that do not encode a copy of the TetR repressor, expression of APX W41F is constitutive. Any bacterial strain can be used for plasmid propagation. The pZE plasmid system was developed by Lutz and Bujard, and described in their paper entitled "Independent and tight regulation of transcriptional units in Escherichia coli via the LacR/O, the TetR/O and AraC/I1-I2 regulatory elements" (PMID: 9092630).

Plasmid Name: pZE21-APX(W41F) dimeric

Relevant Mutation: W41F

Record Creation Time: 20220422T222337+0000

Record Last Update: 20260829T080747+0000

Ratings and Alerts

No rating or validation information has been found for pZE21-APX(W41F) dimeric.

No alerts have been found for pZE21-APX(W41F) dimeric.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.