

Resource Summary Report

Generated by [RRID](#) on Aug 26, 2026

pTACT1

RRID:Addgene_24779

Type: Plasmid

Proper Citation

RRID:Addgene_24779

Plasmid Information

URL: <http://www.addgene.org/24779>

Proper Citation: RRID:Addgene_24779

Insert Name: TetR

Organism: Bacterial

Bacterial Resistance: Kanamycin

Defining Citation: [PMID:15933004](#)

Vector Backbone Description: Backbone Size:4120; Vector Backbone:pMV206; Vector Types:Mycobacterial shuttle vector; Bacterial Resistance:Kanamycin

Comments: There are a few mismatches between depositor's sequence and the quality control sequence Addgene has obtained. The region of mismatch and gaps is derived from the parental vector and not the important part of the vector. Infect Immun. 2001 Dec;69(12):7851-7. Evaluation of a tetracycline-inducible promoter in Staphylococcus aureus in vitro and in vivo and its application in demonstrating the role of sigB in microcolony formation. Bateman BT, Donegan NP, Jarry TM, Palma M, Cheung AL. Department of Microbiology and Immunology, Dartmouth Medical School, Hanover, New Hampshire 03755, USA. Abstract An inducible promoter system provides a powerful tool for studying the genetic basis for virulence. A variety of inducible systems have been used in other organisms, including pXyl-xylR-inducible promoter, the pSpac-lacI system, and the arabinose-inducible P(BAD) promoter, but each of these systems has limitations in its application to Staphylococcus aureus. In this study, we demonstrated the efficacy of a tetracycline-inducible promoter system in inducing gene expression in S. aureus in vitro and inside epithelial cells as well as in an animal model of infection. Using the xyl/tetO promoter::gfp(uvr) fusion carried on a shuttle plasmid, we demonstrated that dose-dependent tetracycline induction, as measured by bacterial fluorescence, occurred in each of the above environments while basal activation under noninduced conditions remained low. To ascertain how the system can be used to elucidate the genetic basis of a

pathogenic phenotype, we cloned the sigB gene downstream of the inducible promoter. Induction of SigB expression led to dose-dependent attachment of the tested strain to polystyrene microtiter wells. Additionally, bacterial microcolony formation, an event preceding mature biofilm formation, also increased with tetracycline induction of SigB. PMID: 11705967 [PubMed - indexed for MEDLINE]PMCID: PMC98881Free PMC Article

Plasmid Name: pTACT1

Record Creation Time: 20220422T222110+0000

Record Last Update: 20260815T081235+0000

Ratings and Alerts

No rating or validation information has been found for pTACT1.

No alerts have been found for pTACT1.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.