Table S1. Bacterial strains, plasmids and primers used in this study.

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| --- | --- | --- |
| Strain/ Plasmid/ Primer | Description | Source (Reference) |
| **Strains**  ***E. coli***  DH5α  S17-1  ***P. aeruginosa***  PA14  *fis*::Tn  *fis*::Tn/*att7*::*fis*  Δ*fis*/pMMB67EH-*fis*-His  *fis*::Tn/pUCP20-P*tac*-*exsA*  PA14 T0T1  *fis*::Tn T0T1  **Plasmid**  pEX18Tc  pUC18T-mini-Tn7T-Tc  pUC18T-mini-Tn7T-Tc-*fis*  pMMB67EH  pMMB67EH-*fis*-His  pUCP20-P*tac*-*exsA*  pEX18Tc-T0T1 insertion  *exsA*-Flag-A  *exsA*-Flag-S  pDN19lacΩ  P*exsA*-*lacZ*  P*exsC*-*lacZ*  P*exsC-A*-*lacZ*  P*exsC-Am1*-*lacZ*  P*exsC-Am2*-*lacZ*  pUCP20-P*exsA*-*exsA*-His  pUCP20-P*exoU*-*exoU*-His  **Primer**  PA4853pup  PA4853pdown  PA4853up  PA4853down  PA4853sense2  PA4853antisense2  PA4852SENSE  PA4852ANTISENSE  exsC sense  exsC antisense  exsU sense  exsU antisense  exsA’ sense  exsA’ antisense  PexsA fis up2  PexsA-flag-his  B+A UP  B+A DOWN  PexsC-Aup  PexsC-Adown  T0T1upstreamF  T0T1upstreamR  T0T1downstreamF  T0T1downstreamR  T0T1up  T0T1down  Overlap shang m1  Overlap xia m1  Overlap shang m2  Overlap xia m2 | F-, φ80d*lacZ*ΔM15, Δ(*lacZYA-argF*)U169, *deoR*, *recA1*, *endA1*, *hsdR17*(*r*k-,*m*k+), *phoA*, *supE44*, λ-, *thi-1*, *gyrA96*, *relA1*  *recA*, *pro*, *hsdR*, RP4-2-Tc::Mu-Km::Tn7  Wild type strain of *Pseudomonas aeruginosa*  PA14 with MAR2xT7 transposon inserted at *fis*; Gmr  *fis*::Tn with *fis* inserted on chromosome with mini-Tn7T insertion; Gmr, Tcr  PA14 knockout *fis* with *fis*-His is driven by an inducible *tac* promoter; Cbr  *fis*::Tn with *exsA* overexpression  PA14 with terminators T0T1 inserted at *exsB*-*exsA* intergenic region before *exsA* promoter  *fis*::Tn with terminators T0T1 inserted at *exsB*-*exsA* intergenic region before *exsA* promoter; Gmr  Gene replacement vector; Tcr, *oriT*+, *sacB*+  mini-Tn7 base vector from insertion into chromosome attTn7 site; Tcr  pUC18T-mini-Tn7T-Tc with *fis*; Tcr  Expression vector with *tac* promoter; Apr  pMMB67EH with *fis*-His driven by an inducible *tac* promoter; Apr  pUCP20 with *exsA* driven by *tac* promoter  T0T1 insertion at PA14 *exsB*-*exsA* intergenic region on pEX18Tc; Tcr  *exsA*-Flag-CTC (containing *exsA* ORF only) fused with pDN19; Apr , Tcr  *exsA*-Flag-CTC (containing *exsA* ORF and 225bp upstream fragment) fused with pDN19; Apr , Tcr  Promoterless lacZ fusion vector, Spr, Smr, Tcr  *exsA* promoter-*lacZ* fusion reporter in pDN19lacΩ; Spr, Smr, Tcr  *exsC* promoter*-lacZ* fusion reporter in pDN19lacΩ; Spr, Smr, Tcr  *exsC* promoter to *exsA* promoter*-lacZ* fusion reporter in pDN19lacΩ; Spr, Smr, Tcr  points mutation in P*exsC-A*-*lacZ*; Spr, Smr, Tcr  points mutation in P*exsC-A*-*lacZ*; Spr, Smr, Tcr  *exsA* promoter of PA14 fused to *exsA-His* on promoterless pUCP20; Apr  *exoU* promoter of PA14 fused to *exoU-His* on promoterless pUCP20; Apr  **Sequence (5’→3’)**  CGCGGATCCGGTCCGCAGCCATCCCGAATTCAGC  AAAACTGCAGGGGGCTTCCCTGTCTTGCGGTGCTG  AAAACTGCAGACAACGGAACAGGGGTGGCCGCATG  CCGGAATTCGGAGCCCGCCGCCGCTCTTAAAGAA  TTACAACATGGTGCTCTG  ATCGTATTGCTTGAGTTTCT  CAATGTGGAACTCGGTGC  GCTGCCTTGTTGCATACC  ATGGATTTAACGAGCAAGGTCAA  GAGGGACAGGGAAGGCAAA  CTTCAGAGCGTCATACCT  CAACACTGGTGAGCATAC  AAGGAGCCAAATCTCTTG  CTTGTTTACCCTGTATTCG  GCTCTAGATGATACATTGCCTGCT  CCCAAGCTTTCAGTGGTGGTGGTGGTGGTGCTTATCGTCGTCATC  TCGCCCGGAAGAAAGATCTGGC  CCCTGTATTCGAAAGTTGGAATGT  CCGGAATTCGGTGATCCAGTCCTTCGTCCAGATG  CGCGGATCCTTATAAGAACCCCAACACTTCCCGTC  CCGGAATTCGCACCGTTTCGATCTGCATTTC  CGCGGATCCCGAGACTTGCACTTCTTTAATCTCCATA  CTAGTCTAGAGTTCGTTGTCAGGGAAGGCCTCG  CCCAAGCTTACTGACTGGAAAAGCCCGCCTC  CGCGGATCCGACTCCTGTTGATAGATCCAGTAATGACCTC  CTAGTCTAGAGGCGGATTTGTCCTACTCAGGAGAG  CACGGAGTCCATTTTATAATAATGAGGATTATC  GATAATCCTCATTATTATAAAATGGACTCCGTG  CACGGAGTCGATATTATAATTATCAGGATTATC  GATAATCCTGATAATTATAATATCGACTCCGTG | TransGen  ([Simon et al., 1983](#_ENREF_7))  ([Liberati et al., 2006](#_ENREF_6))  ([Liberati et al., 2006](#_ENREF_6))  this study  this study  this study  this study  this study  ([Hoang et al., 1998](#_ENREF_3))  ([Choi and Schweizer, 2006](#_ENREF_1))  this study  ([Furste et al., 1986](#_ENREF_2))  this study  this study  this study  ([Li et al., 2013](#_ENREF_4))  ([Li et al., 2013](#_ENREF_4))  ([Totten and Lory, 1990](#_ENREF_8))  this study  this study  this study  this study  this study  this study  ([Li et al., 2016](#_ENREF_5))  **Purpose**  *fis* promoter cloning  *fis* promoter cloning  *fis* cloning  *fis* cloning  real-time PCR  real-time PCR  real-time PCR  real-time PCR  real-time PCR  real-time PCR  real-time PCR  real-time PCR  real-time PCR  real-time PCR  *exsA* cloning  *exsA* cloning  RT-PCR  RT-PCR  *exsC-A* promoter cloning  *exsC-A* promoter cloning  T0T1 insertion  T0T1 insertion  T0T1 insertion  T0T1 insertion  T0T1 insertion  T0T1 insertion  site-directed mutagenesis  site-directed mutagenesis  site-directed mutagenesis  site-directed mutagenesis |

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