

Table S1. Bacterial strains and plasmids used in this study

Strain or plasmid	Relevant characteristics	Source
<i>E. coli</i>		
DH5 α	<i>F⁻ ϕ80lacZ ΔM15 Δ(lacZYA-argF)U169 recA1 endA1 hsdR17(rk⁻, mk⁺)phoA supE44 thi-1 gyrA96 relA1 tonA</i>	Stratagene
<i>P. aeruginosa</i>		
PAO1	Wild type	This lab
<i>tspR</i> ::Tn	PA4857 transposon mutagenesis mutant	This study
<i>tspR</i> ::Gm	<i>tspR</i> (PA4857) insertion mutant of PAO1; Gm ^r	This study
<i>tspR</i> ::Tc	<i>tspR</i> (PA4857) insertion mutant of PAO1; Tc ^r	This study
<i>retS</i> ::Gm	<i>retS</i> insertion mutant of PAO1; Gm ^r	This study
<i>exsA</i> ::Gm	<i>exsA</i> insertion mutant of PAO1; Gm ^r	This study
<i>rsmY</i> ::Gm	<i>rsmY</i> insertion mutant of PAO1; Gm ^r	This study
<i>rsmZ</i> ::Gm	<i>rsmZ</i> insertion mutant of PAO1; Gm ^r	This study
<i>rsmY</i> ::Gm/ <i>tspR</i> ::Tc	<i>tspR</i> and <i>rsmY</i> double mutant of PAO1; Gm ^r , Tc ^r	This study
<i>rsmZ</i> ::Gm/ <i>tspR</i> ::Tc	<i>tspR</i> and <i>rsmZ</i> double mutant of PAO1; Gm ^r , Tc ^r	This study
<i>tspR</i> ::Gm/CTX- <i>tspR</i>	<i>tspR</i> ::Gm complemented strain, derived from <i>tspR</i> ::Gm and Mini-CTX- <i>tspR</i> ; Gm ^r , Tc ^r	This study
<i>tspR</i> ::Gm / <i>p-tspR</i>	<i>tspR</i> ::Gm complemented strain, derived from <i>tspR</i> ::Gm and pAK1900- <i>tspR</i> ; Gm ^r , Cb ^r	This study
<i>retS</i> ::Gm/ <i>p-retS</i>	<i>retS</i> ::Gm complemented strain, derived from <i>retS</i> ::Gm and pAK1900- <i>retS</i> ; Gm ^r , Cb ^r	This study
<i>retS</i> ::Gm/ <i>p-tspR</i>	<i>retS</i> ::Gm strain carrying plasmid pAK1900- <i>tspR</i> ; Gm ^r , Cb ^r	This study
Plasmids		
pBT20	Mini-TnM delivery vector, Ap ^r , Gm ^r	(Kulasekara, <i>et al.</i> , 2005)
pEX18Ap	<i>oriT⁺ sacB⁺</i> gene replacement vector with multiple-cloning site from pUC18; Ap ^r	(Hoang, <i>et al.</i> , 1998)
pEX18Tc	<i>oriT⁺ sacB⁺</i> gene replacement vector with multiple-cloning site from pUC18; Tc ^r	(Hoang, <i>et al.</i> , 1998)
pPS858	Source plasmid of Gm ^r cassette; Gm ^r , Ap ^r	(Hoang, <i>et al.</i> , 1998)
pRK2013	Broad-host-range helper vector; Tra ⁺ , Kn ^r	(Ditta, <i>et al.</i> , 1980)
pMS402	Expression reporter plasmid carrying the promoterless <i>luxCDABE</i> gene; Kn ^r , Tmp ^r	(Duan, <i>et al.</i> , 2003)
pAK1900	<i>E. coli</i> - <i>P. aeruginosa</i> shuttle cloning vector carrying <i>plac</i> upstream of MCS; Ap ^r , Cb ^r	(Poole, <i>et al.</i> , 1993)
<i>exsA</i> -FLAG-A	<i>exsA</i> genes with <i>Ptac</i> and FLAG	(Li, <i>et al.</i> , 2013)
<i>exsA</i> -FLAG-S	<i>exsA</i> genes with <i>Ptac</i> , promoter region and FLAG	(Li, <i>et al.</i> , 2013)

mini-CTX- <i>lacZ</i>	Integration plasmid; Tc ^r	(Becher & Schweizer, 2000)
mini-CTX- <i>lux</i>	Integration plasmid; Tc ^r	(Becher & Schweizer, 2000)
pEX- <i>tspR</i> _{Gm}	<i>tspR</i> deletion plasmid, pEX18Tc with 1959 bp upstream region, Gm ^r cassette from pPS858 and 1463 bp downstream region of <i>tspR</i> ; Tc ^r , Gm ^r	This study
pEX- <i>tspR</i> _{Tc}	<i>tspR</i> deletion plasmid, pEX18Ap with 1959 bp upstream region, Tc ^r cassette from mini-CTX- <i>lacZ</i> and 1463 bp downstream region of <i>tspR</i> ; Tc ^r	This study
pEX- <i>retS</i>	<i>retS</i> deletion plasmid, pEX18Ap with 1958 bp upstream region, Gm ^r cassette from pPS858 and 1981 bp downstream of <i>retS</i> ; Ap ^r , Gm ^r	This study
pEX- <i>exsA</i>	<i>exsA</i> deletion plasmid, pEX18Ap with 1963 bp upstream region, Gm ^r cassette from pPS858 and 1972 bp downstream region of <i>exsA</i> ; Ap ^r , Gm ^r	This study
pEX- <i>rsmY</i>	<i>rsmY</i> deletion plasmid, pEX18Ap with 1963 bp upstream region, Tc ^r cassette from mini-CTX- <i>lacZ</i> and 1979 bp downstream of <i>rsmY</i> ; Ap ^r , Tc ^r	This study
pEX- <i>rsmZ</i>	<i>rsmZ</i> deletion plasmid, pEX18Ap with 1974 bp upstream region, Tc ^r cassette from mini-CTX- <i>lacZ</i> and 1972 bp downstream of <i>rsmZ</i> ; Ap ^r , Gm ^r	This study
p- <i>tspR</i>	pAK1900 with the entire <i>tspR</i> gene; Ap ^r	This study
p- <i>retS</i>	pAK1900 with the entire <i>retS</i> gene; Ap ^r	This study
p <i>exoS-lux</i>	pMS402 containing <i>exoS</i> promoter region; Kn ^r , Tmp ^r	(Duan, <i>et al.</i> , 2003)
P <i>exoY-lux</i>	pMS402 containing <i>exoY</i> promoter region; Kn ^r , Tmp ^r	(Duan, <i>et al.</i> , 2003)
P <i>exoT-lux</i>	pMS402 containing <i>exoT</i> promoter region; Kn ^r , Tmp ^r	(Duan, <i>et al.</i> , 2003)
P <i>tspR-lux</i>	pMS402 containing <i>tspR</i> promoter region; Kn ^r , Tmp ^r . The promoter region of <i>tspR</i> is -522 to +77 from <i>tspR</i> translational starting site.	This study
P <i>retS-lux</i>	pMS402 containing <i>retS</i> promoter region; Kn ^r , Tmp ^r . The promoter region of <i>retS</i> is -378 to +139 from <i>retS</i> translational starting site.	This study
P <i>exsC-lux</i>	pMS402 containing <i>exsC</i> promoter region; Kn ^r , Tmp ^r	(Kong, <i>et al.</i> , 2013)
CTX- <i>tspR-lux</i>	Integration plasmid, CTX6.1 with a fragment of pKD- <i>tspR</i> ; Kn ^r , Tc ^r	This study
CTX- <i>exoS-lux</i>	Integration plasmid, CTX6.1 with a fragment of pKD- <i>exoS</i> ; Kn ^r , Tc ^r	(Liang, <i>et al.</i> , 2011)

CTX- <i>exoT-lux</i>	Integration plasmid, CTX6.1 with a fragment of pKD- <i>exoT</i> ; Kn ^r , Tc ^r	(Liang, <i>et al.</i> , 2011)
CTX- <i>exoY-lux</i>	Integration plasmid, CTX6.1 with a fragment of pKD- <i>exoY</i> ; Kn ^r , Tc ^r	(Liang, <i>et al.</i> , 2011)

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