

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

Strains	Relevant features	Reference
<i>Pseudomonas aeruginosa</i>		
PAO1	Wild type	(1)
$\Delta copA1$	PW7626, <i>copA1</i> (PA3920)::lSphoA/hah::Tet ^R	(2)
$\Delta copR$	PW5704, <i>copR</i> (PA2809)::lSphoA/hah::Tet ^R	(2)
<i>copRcomp</i>	$\Delta copR$ complemented with <i>copR</i> gene under endogenous promoter; C-term His ₆ ; Gm ^R	This study
<i>copR_{D51A}</i>	$\Delta copR$ complemented with <i>copR_{D51A}</i> gene under endogenous promoter; C-term His ₆ ; Gm ^R	This study
<i>copR_{D51E}</i>	$\Delta copR$ complemented with <i>copR_{D51E}</i> gene under endogenous promoter; C-term His ₆ ; Gm ^R	This study
$\Delta copS$	PW5705, <i>copS</i> (PA2810)::lSphoA/hah::Tet ^R	(2)
$\Delta copS$	PW5706, <i>copS</i> (PA2810)::lSphoA/hah::Tet ^R	(2)
<i>copScomp</i>	$\Delta copS$ complemented with <i>copS</i> gene under endogenous promoter; C-term His ₆ ; Gm ^R	This study
<i>copS_{H235A}</i>	$\Delta copS$ complemented with <i>copS_{H235A}</i> gene under endogenous promoter; C-term His ₆ ; Gm ^R	This study
<i>Escherichia coli</i>		
Top10	<i>F mcrA Φ80lacZΔM15 ΔlacX74 recA1 araD139 Δ(ara-leu)7697 galU galK rpsL (Str^R) endA1 nupG</i>	Invitrogen
LMG194	<i>F- ΔlacX74 gal E thi rpsL ΔphoA (Pvu II) Δara714 leu::Tn10</i>	Invitrogen
SM10(Apir)/pTNS2	<i>thi-1, thr, leu, tonA, lacY, supE, recA::RP4-2- Tc::Mu, pir / pTNS2 (Amp^R oriR6K, tnsABCDE); Km^R/Helper plasmid (TnsABCD site), Amp^R</i>	(3)
HB101/pRK2013	<i>F- mcrB mrr hsdS20(rB- mB-) recA13 leuB6 ara-14 proA2 lacY1 galK2 xyl-5 mtl-1 rpsL20 (Sm^R) glnV44 λ- / pRK2013 (Km^R oriColE1 RK2-Mob+ RK2-Tra+)</i>	(3)
Plasmids	Relevant features	Reference
pBADtopo	<i>araBAD</i> promoter, V5 epitope tag, His ₆ -tag, Amp ^R	Invitrogen
CopS ₍₃₄₋₁₅₁₎ _His ₆ :pBAD	DNA fragment encoding for the periplasmic copper binding loop of CopS residues 34 to 151. C-term His ₆ -tag, Amp ^R	This study
CopS ₍₃₄₋₁₅₁₎ _Strep:pBAD	DNA fragment encoding for the periplasmic copper binding loop of CopS residues 34 to 151. C-term Strep-tag, Amp ^R	This study
pUC18_mini_Tn7T_Gm	Suicide delivery vector, Tn7 transposable site, Gm ^R	(4)
500prom_copR: pUC18_miniTn7T_Gm	500 bp upstream of <i>copR</i> gene + <i>copR</i> gene_His ₆ cloned into the suicide delivery vector, Gm ^R	This study
500prom_copR _{D51A} : pUC18_miniTn7T_Gm	500 bp upstream of <i>copR</i> gene + <i>copR_{D51A}</i> gene_His ₆ cloned into the suicide delivery vector, Gm ^R	This study
500prom_copR _{D51E} : pUC18_miniTn7T_Gm	500 bp upstream of <i>copR</i> gene + <i>copR_{D51E}</i> gene_His ₆ cloned into the suicide delivery vector, Gm ^R	This study
500prom_copS: pUC18_miniTn7T_Gm	500 bp upstream of <i>copR</i> gene + <i>copS</i> gene_His ₆ cloned into the suicide delivery vector, Gm ^R	This study
500prom_copS _{H235A} : pUC18_miniTn7T_Gm	500 bp upstream of <i>copR</i> gene + <i>copS_{H235A}</i> gene_His ₆ cloned into the suicide delivery vector, Gm ^R	This study
Primers	Sequence (5'-3')	Gene
<i>qPCR</i>		
qPA4268_F	gcaaaactgcccgaacgtc	housekeeping
qPA4268_R	tacacgaccgccacggatca	
qPA2064_F	aggtaacctgtacggcagg	<i>pcdB</i>
qPA2064_R	aactcgcgacggatctcatagcg	

Primers	Sequence (5'-3')	Gene
qPA2065_F	caagcacaccatcgacatgcc	<i>pcoA</i>
qPA2065_R	atgctgtgtctccttcgtctaccc	
qPA2806_F	ctgtttcccatttcacgcac	<i>queF</i>
qPA2806_R	gtagcagttccagatatccacg	
qPA2807_F	cgatggagattccccgta	<i>PA2807</i>
qPA2807_R	cgaggacgatcaggggaag	
qPA2808_F	ggcgacatcgtcttcgag	<i>ptrA</i>
qPA2808_R	tccttctcgtcgtctcg	
qPA2809_F	tgctcgaactgctgctgc	<i>copR</i>
qPA2809_R	acctgatgacgttggtatcgc	
qPA2810_F	agatagctatccgtctcggcgacc	<i>copS</i>
qPA2810_R	acgatagaaccggtcgaacagggc	
qPA3522_F	agtacaacagctggctgttgcc	<i>cusA</i>
qPA3522_R	tggacgaacacgttgtgtcgc	
qPA3920_R	gaaacgggtgctggcgaagat	<i>copA1</i>
qPA3920_R	ttaaccagggcctgctccag	
qPA3790_F	gacggctcgcagttcaag	<i>oprC</i>
qPA3790_R	gctgacgttcgatttgacg	
<i>Mutants complementation</i>		
pUC_copR_His_F	aactgcagtgctgggagcattacatc	
pUC_copR_His_R	ggactagtcaatgggtgatgggtgatgaggactgaaaatacaggtttcgcgctgcttctcgcgctcttcgag	
copSR_promot_GA_F	catgagctcattttctgcagtgctgggagcattacatc	
copS_prom_over_R	acatccgcgagccgaaccggcgtcatgttcatccctcgttacatt	
copS_whole_F	agcgccgggttcggctcg	
copS_pUC_His_GA_R	taccgggcccctttaagcttcaatgatgatgatgatgatgctggcgccggcgagcgaa	
pUCTn7Gm_GA_F	aagcttaaaggcccggtacctcgcga	
pUCTn7Gm_GA_R	ctgcagaaaatgagctcatgcatgacg	
<i>Site mutants</i>		
copS_H235A_F	gcagagttgcgacccccgctcaccagc	
copS_H235A_R	agcggggtcgcgaactctcggcgatgctggcgggagaac	
copR_D51A_F	gcagtcagctgcccggccgtgac	
copR_D51A_R	cggccgggcagcatgactcgcgaggatcagcagggtcgtagtcg	
copR_D51E_F	gaagtcagctgcccggccgtgac	
copR_D51E_R	cggccgggcagcatgactcgcgaggatcagcagggtcgtagtcg	
<i>Protein expression</i>		
copSsol_Strep_F	ttcagcagggccatcgac	
copSsol_Strep_R	tcattttcgaactcgggtggctccaagcgtcaactggcgcgcatgctgtg	
copSsol_TEV_His_R	ggactgaaaatacaggtttcgcgctgctcaactggcgcgcatgctgtg	

1. Winsor GL, Griffiths EJ, Lo R, Dhillon BK, Shay JA, Brinkman FS. 2015. Nucleic acids research 44:D646-D653.
2. Jacobs MA, Alwood A, Thaipisuttikul I, Spencer D, Haugen E, Ernst S, Will O, Kaul R, Raymond C, Levy R, Chun-Rong L, Guenther D, Bovee D, Olson MV, Manoil C. 2003. Proc Nat Acad Sci USA 100:14339-44.
3. Choi KH, Schweizer HP. 2006. Nat Protoc 1:153-61.
4. Choi K-H, Gaynor JB, White KG, Lopez C, Bosio CM, Karkhoff-Schweizer RR, Schweizer HP. 2005. Nature Methods 2:443.