

1 **Table S1.** Bacterial strains and plasmids used in this study.

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Strain/plasmid	Description / relevant characteristics	Reference
<i>Strains</i>		
<i>Escherichia coli</i> DH5 α	F ⁻ , <i>supE44</i> , Δ <i>lacU169</i> , (ϕ 80 <i>lacZDM15</i>), <i>hsdR17</i> , (<i>rk</i> ⁻ <i>mk</i> ⁺), <i>recA1</i> , <i>endA1</i> , <i>thi1</i> , <i>gyrA</i> , <i>relA</i>	(1)
<i>Pseudomonas aeruginosa</i> PA14	Wild type strain	(2)
<i>P. aeruginosa</i> Δ <i>mexAB</i>	PA14 strain with a complete deletion of <i>mexAB</i> genes	(3)
<i>P. aeruginosa</i> Δ <i>mexCD</i>	PA14 strain with a complete deletion of <i>mexCD</i> genes	(3)
<i>P. aeruginosa</i> Δ <i>mexEF</i>	PA14 strain with a complete deletion of <i>mexEF</i> genes	(3)
<i>P. aeruginosa</i> Δ <i>mexXY</i>	PA14 strain with a complete deletion of <i>mexXY</i> genes	(3)
<i>Plasmids</i>		
pSEVA634	Gm ^R , <i>oriV</i> pBBR1, <i>oriT</i> , <i>lacI</i> ^q / <i>P</i> _{trc} expression cassette	(4)
pS234- <i>FDH1</i>	Km ^R , <i>oriV</i> pBBR1, <i>oriT</i> , <i>lacI</i> ^q / <i>P</i> _{trc} controlling the expression of <i>FDH1</i> ^{Cb}	(5)
pS234- <i>nox</i>	Km ^R , <i>oriV</i> pBBR1, <i>oriT</i> , <i>lacI</i> ^q / <i>P</i> _{trc} controlling the expression of <i>nox</i> ^{Sp}	(6)
pAAHFDH1	Gm ^R , pSEVA634 expressing the <i>FDH1</i> ^{Cb} under the control of <i>lacI</i> ^q / <i>P</i> _{trc}	This Work
pAAHnox1	Gm ^R , pSEVA634 expressing the <i>nox</i> ^{Sp} under the control of <i>lacI</i> ^q / <i>P</i> _{trc}	This Work
pSEVA247R	Km ^R , <i>oriV</i> pRO1600/ <i>ColE1</i> , <i>oriT</i> , promoterless vector including <i>mcherry</i> as a reporter gene	(4)
pAAHPoxyR2	Km ^R , pSEVA247R cloned with the <i>oxyR</i> promoter. Used as a oxidative stress sensor	This Work
pS2513- <i>PHP</i>	Km ^R , <i>oriV</i> RSF1010, <i>oriT</i> , <i>P</i> _{EM7} \rightarrow <i>PHP</i> . Used for the quantification of intracellular pH	(7)

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6 **REFERENCES**

- 7 1. Hanahan D, Meselson M. 1983. Plasmid screening at high colony density. *Methods*
8 *Enzymol* 100:333-42.
- 9 2. Friedman L, Kolter R. 2004. Genes involved in matrix formation in *Pseudomonas*
10 *aeruginosa* PA14 biofilms. *Mol Microbiol* 51:675-90.
- 11 3. Seupt A, Schniederjans M, Tomasch J, Haussler S. 2020. Expression of the MexXY
12 Aminoglycoside Efflux Pump and Presence of an Aminoglycoside-Modifying Enzyme in
13 Clinical *Pseudomonas aeruginosa* Isolates Are Highly Correlated. *Antimicrob Agents*
14 *Chemother* 65.
- 15 4. Silva-Rocha R, Martinez-Garcia E, Calles B, Chavarria M, Arce-Rodriguez A, de Las Heras
16 A, Paez-Espino AD, Durante-Rodriguez G, Kim J, Nickel PI, Platero R, de Lorenzo V. 2013.
17 The Standard European Vector Architecture (SEVA): a coherent platform for the analysis
18 and deployment of complex prokaryotic phenotypes. *Nucleic Acids Res* 41:D666-75.
- 19 5. Akkaya O, Perez-Pantoja DR, Calles B, Nickel PI, de Lorenzo V. 2018. The Metabolic Redox
20 Regime of *Pseudomonas putida* Tunes Its Evolvability toward Novel Xenobiotic
21 Substrates. *mBio* 9.
- 22 6. Nickel PI, Perez-Pantoja D, de Lorenzo V. 2016. Pyridine nucleotide transhydrogenases
23 enable redox balance of *Pseudomonas putida* during biodegradation of aromatic
24 compounds. *Environ Microbiol* 18:3565-3582.
- 25 7. Arce-Rodriguez A, Volke DC, Bense S, Haussler S, Nickel PI. 2019. Non-invasive,
26 ratiometric determination of intracellular pH in *Pseudomonas species* using a novel
27 genetically encoded indicator. *Microb Biotechnol* 12:799-813.

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