

Supplementary table S1. Bacterial strains, plasmids, phages and oligonucleotides

Strain	Relevant Genotype	Origin or reference
<i>Pseudomonas aeruginosa</i>		
PAO1		(Stover <i>et al.</i> , 2000)
PA14		(Rahme <i>et al.</i> , 1995)
<i>Escherichia coli</i>		
C-1a	<i>E. coli</i> C, prototrophic	(Sasaki and Bertani, 1965)
C-5708	C-1a <i>rpsL31</i>	laboratory collection
C-5868	C-1a $\Delta pnp-751 \Delta bcsA::cat Tn10$	(Carzaniga <i>et al.</i> , 2009)
C-5898	C-1a <i>tetRp alacZ tetAp-kanR</i>	this work
C-5899	C-1a <i>tetRp-alacZ tetAp-aadgfp</i>	this work
C-5901	C-1a Δbio <i>tetRp- alacZ tetAp-aadgfp Pcat⁺-tetR:kan^R</i>	this work
C-5907	C-1a Δbio <i>tetRp- alacZ tetAp-aadgfp Pcat⁺-tetR</i>	this work
C-5912	C-1a <i>tetRp- alacZ tetAp-rpsL⁺:cat</i>	this work
C-5916	C-5708 <i>tetRp-alacZ tetAp-rpsL⁺:cat</i>	this work
C-5918	C-5708 <i>tetRp- alacZ tetAp-rpsL⁺</i>	this work
C-5920	C-5708 <i>tetRp- alacZ tetAp-rpsL⁺ Pcat-10^{CATTTA} - tetR:kan^R</i>	this work
BW25113	<i>E. coli</i> K-12	(Datsenko and Wanner, 2000)
DH10B		(Grant <i>et al.</i> , 1990)
KG264	BW25113 <i>Pcat⁺-tetR:kan^R</i>	this work

KG265 BW25113 *Pcat-10^{CATTTA} -tetR:kan^R* this work

Plasmids and phage	Relevant characteristics^a	Reference
pBAD2-bgaB	carries <i>Bacillus stearothermophilus</i> <i>bgaB</i> gene	(Klinkert <i>et al.</i> , 2012)
pBAD24-Δ1	pBAD24 derivative	(Carzaniga <i>et al.</i> , 2012)
pGM362	carries pHP45 t _Ω terminator	(Briani <i>et al.</i> , 2000)
pGM742	CamR; oriVCold	(Regonesi <i>et al.</i> , 2004)
pGM930	pBAD24-Δ1 derivative carrying pHP45 t _Ω terminator downstream of <i>araBp</i>	this work
pGM931	pHERD20T derivative carrying <i>araBp</i> - t _Ω region of pGM930	this work
pGM932	pGM742 derivative carrying the <i>lacZα-tetRp-tetO-tetAp-kan^R</i> cassette	this work
pGM956	pGZ119HE derivative. Carries pQE31-S1 Shine-Dalgarno and ATG in frame with ST-TIP2.	this work
pGM957	pGZ119HE derivative. Carries pQE31-S1 Shine-Dalgarno and ATG out of frame with ST-TIP2.	this work
pGM978	pGM931 derivative, contains <i>bgaB</i> under pBAD control	this work
pGM980	pGM978 derivative, carries <i>ptxS</i> (2487532-2488013) translationally fused to <i>bgaB</i> .	this work
pGM981	pGM978 derivative, carries <i>ptxS</i> (2487779-2488013) translationally fused to <i>bgaB</i>	this work
pGM989	pGM978 derivative, carries <i>recA</i> (2334354-2334277) translationally fused to <i>bgaB</i>	this work
pGM2011	pGM931 derivative with the insertion of sfGFP	this work
pGM2012	pGM2011 derivative, carries PA5194 (5846939-5847277) translationally fused to sfGFP	this work
pGM2013	pGM2011 derivative, carries PA5194 (5847080-5847277) translationally fused to sfGFP	this work
pGM2013CCC	pGM2013 derivative, carries the substitution of the TTT ₅₈₄₇₁₂₇₋₅₈₄₇₁₂₉ sequence with three cytidines	this work
pGM2013AAA	pGM2013 derivative, carries the substitution of the TTT ₅₈₄₇₁₂₇₋₅₈₄₇₁₂₉ sequence with three adenosines	this work

pGM2016	pGM2011 derivative, carries <i>recA</i> (2334354-2334277) translationally fused to sfGFP	this work
pGZ119HE	<i>oriVCold</i> ; CamR ; <i>P_{tac}</i>	(Lessl <i>et al.</i> , 1992)
pHERD20T	<i>P. aeruginosa-E. coli</i> shuttle vector	(Qiu <i>et al.</i> , 2008)
pKD46	carries λ RED recombination genes	(Datsenko and Wanner, 2000)
pPA5194-HA	pGM931 derivative, carries PA5194 (5847080-5847931) translationally fused to HA	this work
pPtxS-HA	pGM931 derivative, carries <i>ptxS</i> (2487779-2488875) translationally fused to HA	this work
pQE31S1	AmpR; ColE1; <i>rpsA</i> under <i>P_{tac}</i> promoter	(Sukhodolets and Garges, 2003)
pUC19	AmpR; ColE1	(Yanisch-Perron <i>et al.</i> , 1985)
pWH2354	CamR; p15A; <i>lacI^l</i> ; <i>trxA-TIP2</i> under <i>P_{tac}</i> promoter	(Georgi <i>et al.</i> , 2012)
pXG-10SF	pSC101* replicon; CamR	(Corcoran <i>et al.</i> , 2012)
pZR80-2	carries the chimeric <i>aadA::gfp</i> gene	(Rizzi <i>et al.</i> , 2008)
P1 HTF	High transduction frequency phage P1 derivative	(Wall and Harriman, 1974)

Oligo	Sequence ^b
1396	AAGGAGGTGATCCAGCCGCA
2600	CTATCAGTGATAGAGAAAAGTGAAATGATTGAACAAGATGGATTG
2601	TAGTCTCGGTCCCCATAAAAAAGGGACCTCTAGGGTCCCCAAGTCGGTCA TTTCGAACCCC
2602	CATTAATTCCTAATTTTTGTTGACAC
2603	TTCACTTTTCTCTATCACTGATAG
2604	GAAATTCAGTAAAAGCCTCCGACCGGAGGCTTTTGACTGGCGGGTGTCGGG GCTG
2605	GTGTCAACAAAAATTAGGAATTAATGA TGACCATGATTACGCCAAGC

2606 ATGTCGCGGTTGATCCTGAAGGAAAAC CTC

2617 AGCTTATTAAGAGGAGAAATTAATA TGAGAGGCATG

2618 CCTCTCATAGTTAATTTCTCCTCTTTAATA

2636 GGTTGAAATGACCGACTTGGGGACCCTAGAGGTCCCTTTTTTATGGGGGG
TGTAGGCTGGAGCTGCTT

2638 TTGATCCTGAAGGAAAACCTCGCGCCTTACCTGTTGAGTAATAGTCTCGGT
TAAAAAATGCCCTCTTGGGTTA

2683 TGATAGAGTTATTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAATGG
ATCCCGAA GCGGTG

2684 GACCTCTAGGGTCCCCAAGTCGGTCATTTTGAACCCCAGAGTCCCGCTCAT
GATGCCTGGAATTAATTCC

2685 AGCCTGCTTTTTTATACTAACTTGAGCGAAACGGGAAGGTAAAAGACAAC
TTCGTCTGTTTCTACTGG

2686 CCATGGGGCTTCTCCAAAACGTGTTTTTTGTTGTTAATTCGGTGTAGACTTT
GTGTAGGCTGGAGCTGC

2689 ACCCGGGAGTGGTGGTGGCGGCAGCGGCGGTGGTGGATCCGGTGGCGGTG
GCTC

2690 TACCGGTACCGCCGCCACCCGAACCGCCACCGCCAGAGCCACCGCCACCGG
A

2691 GGCGGCGGTACCGGTAGCGATAAAAATTATTCACCTGACT

2692 **CCCGAATT**CCGTTACCAATGCCACATCCAC AT

2693 CCCTGCAGCATGCAAACCCGGGAGTGGTG GT

2712 TAAAAAATGCCCTCTTGGGTACATATGAA TATCCTCCTTAGT

2713 TCAGTGATAGAGAAAAGTGAAATGGCAAC AGTTAACCAGC

2714 AAGTCGGTCATTTTGAACCTTACTTAACGGA GAACC

2739 GAATTAAGCTTGCATGCAACC

2740 GCCGCCACCACCACTCC

2803 CTCGGTACCAGTAAAGGAGAAGAACTTTTCAC

2804 CTCCTGCAGCTATTTGTATAGTTCATCCATGC

2811 GGTTTCAACTCCTGGCATCC

2846 GCGCCATGG GGGAGCATATGCGAATCTTC

2847 CCCTGATCTCGACCTGCA

2850 GGGCCATGGCTCGCCGATTGATCGCTTTC

2851 CCCGAATTCATGGTCGATGGCGCGCTC

2852 GGGCCATGGGGTTTCAACTCCTGGCATCC

2865 TCAACTTAGCATCTTCATAACC

2871 GAATTGGGACAACCTCCAGTG

2909 *CTAATACGACTCACTATAGGGTTTCAACTCCTGGCATCC*

2910 GGCCTCGGCCACCTGGTT

2915 TCTCCATGGCAACAGAACATATTGACTATCC

2916 CACGAATTCCTTTCTGTTTGTTCGTCGATAG

2928 TCTGGTACCCAACAGAACATATTGACTATCC

2929 CACGGTACCTTTCTGTTTGTTCGTCGATAG

2976 *CTAATACGACTCACTATAGGGCCTCGGCCACCTGGTT*

3003 GGAACGGAGAGGCATTATCC

3004 GGGGGTACCCTTGTCGAAGAGCCAGAAC

3005 GGGGGTACCCTGCGCTCGAGATCGAC

3006 GGGGGTACCGCTTCGTGACAGTCGTAC

3040 *CTAATACGACTCACTATAGGGCTTCGTGACAGTCGTAC*

3041 GCAGGAGCGCCAGAAGAT

3141 ATGGATAATGCCTCTCCGTT
3142 AACGGAGAGGCATTATCCATAGGGTCGTTTCCCC
3143 AACGGAGAGGCATTATCCATATTTTCGTTTCCCC
3144 TCAAGCGTAGTCTGGGACGTCGTATGGGTAGGCCGAGTCGCGGACCA
3145 TCAAGCGTAGTCTGGGACGTCGTATGGGTAGGCCGAGTCGCGGACCA
3150 *CTAATACGACTCACTATAGGGCCCCAGAGCCACAGG*

^a *P.aeruginosa* coordinates refer to Genbank accession numbers NC_002516; *E. coli recA* gene coordinates refer to Genbank Accession Number U00096.2.

^b Boldface characters, restriction sites; italics, T7 promoter

REFERENCES

- Briani, F., Ghisotti, D., and Dehò, G. (2000). Antisense RNA-dependent transcription termination sites that modulate lysogenic development of satellite phage P4. *Mol.Microbiol.* **36**, 1124-1134.
- Carzaniga, T., Antoniani, D., Dehò, G., Briani, F., and Landini, P. (2012). The RNA processing enzyme polynucleotide phosphorylase negatively controls biofilm formation by repressing poly-N-acetylglucosamine (PNAG) production in *Escherichia coli* C. *BMC.Microbiol.* **12**, 270.
- Carzaniga, T., Briani, F., Zangrossi, S., Merlino, G., Marchi, P., and Dehò, G. (2009). Autogenous regulation of *Escherichia coli* polynucleotide phosphorylase expression revisited. *J.Bacteriol.* **191**, 1738-1748.
- Corcoran, C.P., Podkaminski, D., Papenfort, K., Urban, J.H., Hinton, J.C., and Vogel, J. (2012). Superfolder GFP reporters validate diverse new mRNA targets of the classic porin regulator, MicF RNA. *Mol Microbiol* **84**, 428-445.
- Datsenko, K.A., and Wanner, B.L. (2000). One-step inactivation of chromosomal genes in *Escherichia coli* K-12 using PCR products. *Proc.Natl.Acad.Sci.U.S.A* **97**, 6640-6645.
- Georgi, C., Buerger, J., Hillen, W., and Berens, C. (2012). Promoter strength driving TetR determines the regulatory properties of Tet-controlled expression systems. *PloS one* **7**, e41620.
- Grant, S.G., Jessee, J., Bloom, F.R., and Hanahan, D. (1990). Differential plasmid rescue from transgenic mouse DNAs into *Escherichia coli* methylation-restriction mutants. *Proc Natl Acad Sci U S A* **87**, 4645-4649.
- Klinkert, B., Cimdins, A., Gaubig, L.C., Rossmann, J., Aschke-Sonnenborn, U., and Narberhaus, F. (2012). Thermogenetic tools to monitor temperature-dependent gene expression in bacteria. *Journal of biotechnology* **160**, 55-63.
- Lessl, M., Balzer, D., Lurz, R., Waters, V.L., Guiney, D.G., and Lanka, E. (1992). Dissection of IncP conjugative plasmid transfer: definition of the transfer region Tra2 by mobilization of the Tra1 region in trans. *J.Bacteriol.* **174**, 2493-2500.

- Qiu, D., Damron, F.H., Mima, T., Schweizer, H.P., and Yu, H.D. (2008). PBAD-based shuttle vectors for functional analysis of toxic and highly regulated genes in *Pseudomonas* and *Burkholderia* spp. and other bacteria. *Appl. Environ. Microbiol.* **74**, 7422-7426.
- Rahme, L.G., Stevens, E.J., Wolfort, S.F., Shao, J., Tompkins, R.G., and Ausubel, F.M. (1995). Common virulence factors for bacterial pathogenicity in plants and animals. *Science* **268**, 1899-1902.
- Regonesi, M.E., Briani, F., Ghetta, A., Zangrossi, S., Ghisotti, D., Tortora, P., and Deho', G. (2004). A mutation in polynucleotide phosphorylase from *Escherichia coli* impairing RNA binding and degradosome stability. *Nucleic Acids Res.* **32**, 1006-1017.
- Rizzi, A., Pontiroli, A., Brusetti, L., Borin, S., Sorlini, C., Abruzzese, A., Sacchi, G.A., Vogel, T.M., Simonet, P., Bazzicalupo, M., *et al.* (2008). Strategy for *in situ* detection of natural transformation-based horizontal gene transfer events. *Applied and environmental microbiology* **74**, 1250-1254.
- Sasaki, I., and Bertani, G. (1965). Growth abnormalities in Hfr derivatives of *Escherichia coli* strain C. *J. Gen. Microbiol.* **40**, 365-376.
- Stover, C.K., Pham, X.Q., Erwin, A.L., Mizoguchi, S.D., Warrenner, P., Hickey, M.J., Brinkman, F.S., Hufnagle, W.O., Kowalik, D.J., Lagrou, M., *et al.* (2000). Complete genome sequence of *Pseudomonas aeruginosa* PAO1, an opportunistic pathogen. *Nature* **406**, 959-964.
- Sukhodolets, M.V., and Garges, S. (2003). Interaction of *Escherichia coli* RNA polymerase with the ribosomal protein S1 and the Sm-like ATPase Hfq. *Biochemistry* **42**, 8022-8034.
- Wall, J.D., and Harriman, P.D. (1974). Phage P1 mutants with altered transducing abilities for *Escherichia coli* *Virology* **59**, 532-544.
- Yanisch-Perron, C., Vieira, J., and Messing, J. (1985). Improved M13 phage cloning vectors and host strains: nucleotide sequences of the M13mp18 and pUC19 vectors. *Gene* **33**, 103-119.