

Table S1: Sequences of all oligonucleotides used for making RNA probes, agarose Northern analysis and RT-PCR

Oligo name	Sequence 5' to 3'	Length (nts)	Used for	Size of product
ygeH-F	GAAAGAGTTAGGTGATTAATAGTATTACTTG	32	RNA probe for ygeH antisense RNA	375 nts
ygeH-R	GCCATCGGATAGGTATAGAG	20	RNA probe for ygeH antisense RNA	375 nts
rhsE-F	CAGGGGATAGACAAGGTCAGCCAGC	25	RNA probe for rhsE antisense RNA	210 nts
rhsE-R	CTAATAATTTGAAGCATCTGAAGTCC	26	RNA probe for rhsE antisense RNA	210 nts
yfjN-F	CTCACTGGAGCCAATCGTTCTCTGG	25	RNA probe for yfjN antisense RNA	207 nts
yfjN-R	AATTTTCCACACTACGGTATGAGC	24	RNA probe for yfjN antisense RNA	207 nts
yiaO-F	CGTCTGGTTTTATATTCATTATTAGTCC	29	RNA probe for yiaO antisense RNA	278 nts
yiaO-R	TTAATTTTCAGCTCGCTTTGGTTCTCTCC	29	RNA probe for yiaO antisense RNA	278 nts
yjcE-F	GCCACACGGGAGATCAGCAACGAAACG	27	RNA probe for yjcE antisense RNA	198 nts
yjcE-R	AATTTATTTGTTTTAGAATCATGAATGTTAGC	32	RNA probe for yjcE antisense RNA	198 nts
ydiM-F	GGCACAGTACGGACAATTTGTTGCAGG	27	RNA probe for ydiM antisense RNA	265 nts
ydiM-R	AATTTGCACAACACCTCCAGCAGAGG	26	RNA probe for ydiM antisense RNA	265 nts
ecpD-F	GCGGACATTGTCATTTCCGGTACTCG	26	RNA probe for ecpD antisense RNA	215 nts
ecpD-R	AATTTGATTGTTTCCCACGTTTGG	25	RNA probe for ecpD antisense RNA	215 nts
topA-F	AAAACGCGTTATCTGGCCGATGCGCCAC	29	RNA probe for topA antisense RNA	274 nts
topA-R	CATTTATAGCCTTAGTGATAGGTGTG	27	RNA probe for topA antisense RNA	274 nts
yehI-F	GGGCATTTCTGGCGTTAAGTCTCTTTGG	28	RNA probe for yehI antisense RNA	214 nts
yehI-R	AATTCCGCCGCTTATCACGTAAGG	25	RNA probe for yehI antisense RNA	214 nts
AygeH-F	CGATGATCATATCTTTCAGTAC	22	PCR for ygeH antisense RNA	124 bp
AygeH-R	CTCACGGAAGATGGAATCTTACTCAAGG	29	RT-PCR for ygeH antisense RNA	124 bp
ArhsE-F	GATCCATGATTCTTTCTTTAGCTGG	25	PCR for rhsE antisense RNA	95 bp
ArhsE-R	GACATTTGGATCAACAATAGCTGACGTGATAGG	33	RT-PCR for rhsE antisense RNA, agarose Northern	95 bp
AyfjN-F	CAAAAAGATGATCCGCTAACTC	22	PCR for yfjN antisense RNA	92 bp
AyfjN-R	CATTTTTATAACGGGACGGTTCCG	25	RT-PCR for yfjN antisense RNA, agarose Northern	92 bp
AyiaO-F	GATCGGGAATAAAAAACAAATACGAC	25	PCR for yiaO antisense RNA	87 bp
AyiaO-R	CAAATTCGATCGATGCAGTCAGAGGCGTTTTCC	33	RT-PCR for yiaO antisense RNA, agarose Northern	87 bp
AyjcE-F	CAAGCAAATCGAGATCGTGCAG	22	PCR for yjcE antisense RNA	103 bp
AyjcE-R	GCGGCATTGCGTTCTGAACG	20	RT-PCR for yjcE antisense RNA, agarose Northern	103 bp
AydiM-F	GATCGACATAGTGATGACATGC	23	PCR for ydiM antisense RNA	114 bp
AydiM-R	TTAGCCAGTTATACCTTATATGG	23	RT-PCR for ydiM antisense RNA	114 bp
AecpD-F	CGTACGTTGACACTTTTTGATCG	24	PCR for ecpD antisense RNA	119 bp
AecpD-R	CATACAACAGCTTTATGCTTCGTAACC	27	RT-PCR for ecpD antisense RNA	119 bp
AtopA-F	CCTCCGGATCCTGCTGTGG	20	PCR for topA antisense RNA	101 bp
AtopA-R	GAAACGCGTGCGCCACTG	18	RT-PCR for topA antisense RNA	101 bp
AyehI-F	CGTCAGATCCCGTGCCGTGC	20	PCR for yehI antisense RNA	108 bp
AyehI-R	TGGGATCTCTTCACTGCGTGG	21	RT-PCR for yehI antisense RNA	108 bp
RyjC-F	AGTCATAACTGCTATTCTCCAGG	23	PCR for RyjC RNA	77 bp
RyjC-R	AGCGCGGTGCGGATGTGCG	19	RT-PCR for RyjC RNA, agarose Northern	77 bp

Table S2: Homology scores for random and selected promoters^a						
Range of β -galactosidase activity (MU)	Strain rank order ^b	Total strains per range	Number of hits per sequence ^c	Insert with 1 or more hits/total (%)	Highest parameter value per hit	Average of highest parameter values
A) Random promoters						
>3000	1	1	1		60.4	
		1		1/1 (100)		60.4
1000 to 3000	2		3		49.7	
	3		2		56.8	
	4		1		63.3	
	5		2		53.8	
		4		4/4 (100)		55.9
300 to 1000	6		4		49.1	
	7		1		51.5	
	8		2		49.1	
	10		1		53.2	
	11		3		51.5	
	9		0			
		6		5/6 (83.3)		50.9
100 to 300	12		1		49.1	
	13		1		50.9	
	14		2		57.4	
	15		2		50.9	
	17		1		52.7	
	20		1		47.9	
	16, 18, 19		0			
		9		6/9 (66.7)		51.5
30 to 100	21		1		45.5	
	24		2		49.1	
	25		1		48.5	
	26		1		49.7	
	27		1		48.5	
	30		2		51.5	
	32		1		47.9	
	34		2		47.9	
	22, 23, 28		0			
	29, 31, 35					
	36					
		16		8/16 (50)		48.6
10 to 30	42		1		51.5	
	51		2		51.5	
	52		5		51.5	
	37-41		0			
	43-50					
	53-6			3/20 (15)		51.5
		20				
<10	62		1		45.5	
	63		1		46.7	
	65		1		47.9	
	67		1		46.7	
	73		1		50.3	
	74		1		46.1	
	75		1		46.7	
	76		1		46.1	
	82		1		45.5	
	84		1		50.3	
	89		2		45.5	
	101		1		46.7	
	17 remaining inserts		0			
		49		12/49 (24.5)		47
B) Selected promoters						
>5000	111		1		50.9	
	112		2		51.5	
	113		3		53.2	
	114		2		49.7	
	115		3		56.8	
	116		3		49.1	
	117		2		53.2	
	118		2		52.1	
				8/8 (100)		52.1
<p>a. Strains were grouped according to their β-galactosidase activities and evaluated for best fit to optimal σ_{70} promoters by pftools2.2 program (Chen et al., 2003).</p> <p>b. The strains are listed here in order of descending β-galactosidase activities except those strains in a group with no "hit" are listed at the end of the group. For strain numbers corresponding to rank orders 1-36, see Table 1. The selected promoters are listed in the same order as in Table 1.</p> <p>c. A hit indicates a homology score of at least 45.0.</p>						