

Supplementary data

Table S1: Primers used in this study.

| | Sequence 5' - 3' | Size (nt) | Tm (°C) | Reference |
|-----------------|---|-----------|---------|------------|
| RT-PCR | | | | |
| Find_intl4 F | CGCAAGGTATGACAGGTGAC | 20 | 57.7 | This study |
| Find_intl4 R | CTCTGCCTGATGGTCTGGA | 19 | 56.4 | |
| GCAAT fw | CTCCTGGAATCCCAAGTATCAG | 22 | 61.6 | [48] |
| GCAAT rv | GGCAGGTTGAACAGCAGTATCT | 22 | 64.4 | |
| recA_dw | GGCGTCAAGCACAAGCTGATCG | 22 | 61 | |
| recA_up | TCGAACTCTTGTTTCGCTTTCGGC | 23 | 60.1 | |
| Gibson assembly | | | | |
| Int4_pBAM Fwd | <u>CGAATTCGAGCTCGGTACCCCTGAAACGG</u> ATGTCAGCCTC | 40 | 55.8 | This study |

| | | | | |
|---------------|---|----|------|-----|
| Int4_pBAM Rev | <u>GTCGACTCTAGAGGATCCCCGCAAGTTCCG</u> CATAATGCTT | 40 | 54.1 | |
| MLSA | | | | |
| gyrA2F | ATGAGCGATCTGGCCAGAGA | 20 | 58.2 | [8] |
| gyrA9R | CGCGCCTTGTTACCTGATA | 20 | 57.7 | |
| gyrB sch3F | CATGTCTACGAGCAGACCTA | 20 | 53.4 | |
| gyrB sch12R | CTCCACGTTTCAGGATCTTGCC | 21 | 58 | |
| rpoD70Fs | ACGACTGACCCGGTACGCATGTA | 23 | 62 | |
| rpoD70Rs | ATAGAAATAACCAGACGTAAGTT | 23 | 49.4 | |
| dnaJ-F | CGAGATCAAGAAGGCGTACAAG | 22 | 55.5 | |
| dnaJ-R | CACCACCTTGACATCAGATC | 21 | 56.1 | |
| dnaX4F | AAAACCCTGGA(AG)GAGCCGCC | 20 | 62.8 | |
| dnaX-11R | AAGGC(GC)AGCAT(GC)CGCAG | 17 | 58.6 | |

| | | | | |
|---------|----------------------|----|------|--|
| recA3F | GCTGGGTCAGATTGAAAAGC | 20 | 54.4 | |
| recA11R | CTCGCCGTTATAGCTGTACC | 20 | 55 | |

Gibson assembly: overlapping sequences are underlined.

Table S2. GenBank access number of sequences used in the alignments.

Table S3. Diversity of cassette promoters in different integrons.

The polymorphisms in the promoters are indicated in gray. Promoter sequence

| Promoter | -35 | Spacer | -10 | Position |
|-----------|--------|---------|--------|------------|
| Consensus | TTGACA | 17(+_1) | TATAAT | |
| Pc4L-1 | TTGCCA | 16 | CAACAT | intI1 |
| Pc4L-2 | ATGAGT | 18 | TATAAA | intI1-attI |
| Pc4L-3 | ATGAAG | 18 | CATAAT | attI |
| Pc4L-4 | TTTCAA | 15 | TCTCAC | attI |
| P2 | TTGTTA | | TACAGT | attI1 |
| PcH2 | TTGACA | 17 | TAAGCT | intI1 |
| PcH1 | TGGACA | 17 | TAAACT | intI1 |
| PcSS | TTGATA | 17 | TAAACT | intI1 |
| PcPUO | TCGACA | 17 | TAAACT | intI1 |
| PcW | TGGACA | 17 | TAAGCT | intI1 |
| PcIn42 | TTGGCA | 17 | TAAACT | intI1 |
| PcIn116 | TTGACA | 17 | TGAACT | intI1 |
| Pc2 | TTTTAA | 17 | TAAAAT | attI2 |
| Pc3 | TAGACA | 17 | TAGGCT | intI3 |
| Pc intIA | TTGAGC | 16 | TCTGAT | attI |

were consulted in reference [68].

Table S4. Ribosome binding sites of cassettes.

| Cassette/gene | Sequence |
|---------------|--------------------------------|
| | ---AGGAGG-----ATG |
| intI4-like | ACATGT <u>TGGAGGT</u> GACTCATG |
| orf1 | TTAG <u>AGGGT</u> TTATATTTATG |
| orf2 | CA <u>AGGA</u> AGACAATCATTATG |
| lpt | CATAT <u>GGAGAA</u> ATTAGTATG |
| aadA1 | GCA <u>AGGCGT</u> TAAACATCATG |
| orf5 | AGCGTTAG <u>AGT</u> GCAAATATG |
| orf 6 | AGCCTCCAC <u>GGAC</u> AGCCATG |
| orf 7 | AATTACGCGAG <u>GACT</u> GAATG |
| orf 8 | CATAGA <u>AGGGGG</u> CAAAAATG |
| orf 9 | GATTCAAGAG <u>TGAT</u> TTTATG |
| orf 10 | CTGCAC <u>AGGT</u> GAATGGCATG |

Ribosome binding sites are underlined.

