**Table S1.** Primers used for PCR in this study and their products

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Primers** | **Sequence (5’-3’)** | **PCR conditions** | **PCR product (size)** | **Reference** |
| 1SSIS256 for | AGATCTatcccattctaaccaagc | 94°C 5 min, 40 cycles of 94°C 30 s, 45°C 30 s, 68°C 4.5 min and 68°C 7 min | Tn*4001* with a single IS*256* arm  | This study |
| 2SSISgent rev | CCATGGctaatgtcttttataatagc |  | (3.2 kbp) |  |
|  |  |  |  |  |
| 1SSIS256 for | AGATCTatcccattctaaccaagc | 94°C 5 min, 35 cycles of 94°C 30 s, 53.5°C 30 s, 68°C 4.5 min and 68°C 7 min | Tn*4001* with both IS*256* arms | This study |
| 3SSIS256 rev | CCATGGaaaaaggccatataacagtc |  | (4.7 kbp) |  |
|  |  |  |  |  |
| Gmgene for | gttAGATCTgggtttatagctaaagaaaataataaaattatagg | 94°C 5 min, 40 cycles of 94°C 30 s, 52°C 30 s, 68°C 2 min and 68°C 5 min | Gentamicin gene  | This study |
| Gmgene rev | gtttcaCCATGGttattatcaatctttataagtccttttataaatttc |  | (1.8 kbp) |  |
|  |  |  |  |  |
| Tnp for | GAGCTCgtgtaaaagtaaaaaggccatataacagtccttttacgg | 94°C 5 min, 40 cycles of 94°C 30 s, 60°C 30 s, 68°C 1.5 min and 68°C 5 min | Transposase gene  | This study |
| Tnp rev | GGTACCttattactacttatcaaaattgatgtattttcttgaag |  | (1.3 kbp) |  |
|  |  |  |  |  |
| Gm for | ccaagagcaataagggcatac | 95°C 2 min, 28 cycles of at 95°C 30 s, 60°C 30 s, 72°C 15 s and 72°C 5 min | Gentamicin screening PCR & probe  | Shil, *et al.,* 2011 |
| Gm rev | acactatcataaccactaccg |  | (223 bp) |  |
|  |  |  |  |  |
| LAtetM for | gcagttatggaagggatacg | 94°C 3 min, 28 cycles of 94°C 45 s, 50°C 45 s, 72°C 25 s and 72°C 5 min | Tetracycline screening PCR  | Lee *et al*., 2008 |
| LBtetM rev | ttcttgaatacaccgagcag |  | (339 bp) |  |
|  |  |  |  |  |
| GKXer1 for | GCGGCCGCttgcagcatataaaaacatacttgc | 94°C 5 min, 28 cycles of 94°C 30 s, 52°C 30 s, 72°C 45 s and 72°C 5 min  | Detection of *xer1* disruption  | This study |
| IR inverse | tggcctttttacttttacacaat |  |  |  |
|  |  |  |  |  |
| GKRE for | GCGGCCGCtgttgaaacattattaccaacaaaca | Same as above | Detection of *type II RE* disruption  | This study |
| IR inverse | tggcctttttacttttacacaat |  |  |  |
|  |  |  |  |  |
| GKp48 for | GCGGCCGCttgctgcttcatgtggtgat | 94°C 5 min, 28 cycles of 94°C 30 s, 52°C 30 s, 72°C 75 s and 72°C 5 min  | Detection of *p48* disruption  | This study |
| IR inverse | tggcctttttacttttacacaat |  |  |  |
|  |  |  |  |  |
| GKoppD for | GCGGCCGCacaataaaaagtttgcaaatccaat | Same as above | Detection of *oppD* disruption  | This study |
| IR inverse | tggcctttttacttttacacaat |  |  |  |
|  |  |  |  |  |
| tuf inverse | gtaatgctatatcggccgttttgcta | 96°C 5 min and 60 cycles of 96°C 30 s, 50°C 10 s, 60°C 4 min | DNA sequence across the Tn-genomic DNA junction | This study |
|  |  |  |  |  |
| T7 universal | taatacgactcactataggg | Same as above | DNA sequence across the Tn-genomic DNA junction | This study |

Upper case letters indicate the restriction endonuclease cleavage sites incorporated into the oligonucleotide primer