**Supplementary Table 2.** Primers used in this study.

|  |  |
| --- | --- |
| Name | Sequence (5’ to 3’) |
| OmpA(NcoI) F | gagaCCATGGgaaaaaagacagc |
| OmpA-his (XbaI) R | gagaTCTAGAtcagtggtggtggtggtggtgagcctgcggctgagttac |
| ompA\_delCmSB F | atattcatggcgtattttggatgataacgaggcgcaaaaaAAAATGAGACGTTGATCGGCACG |
| ompA\_delCmSB R | aaaaccccgcagcagcggggtttttctaccagacgagaacATCAAAGGGAAAACTGTCCA |
| cmSB to OmpA\_F | atattcatggcgtattttggatgataacgaggcgcaaaaaATGAAAAAGACAGCTATCGCG |
| cmSB to OmpAhis\_R | aaaaccccgcagcagcggggtttttctaccagacgagaacTTAGTGGTGGTGGTGGTGGTGAGCCTG |
| ompAc\_delKm F | gcactcgtccggacaacggcatgctgagcctgggtgtttcctaccgtttcTAAattccggggatccgtcgacc |
| ompAc\_delKm R | gcagcggggtttttctaccagacgagaacttaagcctgcggctgagttactgtaggctggagctgcttcg |
| OmpX(NcoI)F | GAGccatgggtAAAAAAATTGCATGTCTTTC |
| OmpX-OmpAc\_F | GTTGGTTACCGCTTCggtcagggcgaagca |
| OmpX-OmpAc\_R | gccctgaccGAAGCGGTAACCAACACCGGC |
| JLEo16-R-XbaI OmpACt | GGGtctagactaagcctgcggctgagttacaacg |
| JLEo20-F-Chrom-OmpX | atattcatggcgtattttggatgataacgaggcgcaaaaaATGAAAAAAATTGCATGTC |
| JLEo22-R-Chrom-OmpACt | aaaaccccgcagcagcggggtttttctaccagacgagaacctaagcctgcggctgagttacaacg |
| ompA -100 | cgccaggggtgctcggcataagccg |
| ompA +100 | tcttctctgaagcaggatctgcaggc |
| 189VPRGS thr\_F | gctccggcaccggaagtaGTGCCGCGCGGATCCcagaccaagcacttcactc |
| 189VPRGS thr\_R | gagtgaagtgcttggtctgGGATCCGCGCGGCACtacttccggtgccggagc |
| 243LVPR thr\_F | ggttacaccgaccgcatcCTGGTGCCGCGCggttctgacgcttacaac |
| 243LVPR thr\_R | gttgtaagcgtcagaaccGCGCGGCACCAGgatgcggtcggtgtaacc |
| KiDo14-F-NdeI-Strep-OmpACTD | GGGcatATGTGGAGCCACCCGCAGTTCGAAAAAgcaccggaagtacagacc |
| KiDo15-R-SacI-Rbs-OmpACTD | GGGGAGCTCGGCTATATCTCCTTCTTAAAGTTAAACAAAATTGCGGCCGCttaagcctgcggctgagttac |
| lacIq NsiI\_F | CGAAGCGGCATGCATTTAC |
| flag3-KpnI\_R | gagagggtaccCTACTTGTCATCGTCATC |
| IgaA(NcoI) F | gagaCcatggggAGCACCATTGTG |
| IgaA XbaI flag3 R | gggTCTAGAttcgataaggctttctgaagggg |
| OA\_stopTGA\_F | actcagccgcaggctTGAcaccaccaccaccac |
| OA\_stopTGA\_R | gtggtggtggtggtgTCAagcctgcggctgagt |
| Palss(NcoI)F | gagCCatgGGAcaactgaacaaagtgctg |
| Palss-OmpAc\_F | GCATGTTCTTCCgaagcagc |
| Palss-OmpAc\_R | ggagctgcttcGGAAGAACATGCCGCAAT |
| OmpA\_stop\_Flag3(KpnI)R | ggtaccCTACTTGTCATCGTCATCCTTGTAATCggatcaagcctgcggctgagttac |
| AA62\_RcsF\_R21x\_F | ctgttccatgttaagcTAGtcccctgtcgaacc |
| AA63\_RcsF\_R21x\_R | ggttcgacaggggaCTAgcttaacatggaacag |
| AA64\_RcsF\_Q28x\_F | ctgtcgaacccgttTAGagcactgcaccccagc |
| AA65\_RcsF\_Q28x\_R | gctggggtgcagtgctCTAaacgggttcgacag |
| AA66\_RcsF\_Q33x\_F | CAAagcactgcacccTAGccgaaagcggagc |
| AA67\_RcsF\_Q33x\_R | gctccgctttcggCTAgggtgcagtgctTTG |
| AA72\_RcsF\_N54x\_F | cCGAatttataccTAGgcagaagaattagtcggc |
| AA73\_RcsF\_N54x\_R | gccgactaattcttctgcCTAggtataaatTCGg |
| AA74\_RcsF\_R89x\_F | cattccaaccgcaTAGaagcggatgcaaatcaacg |
| AA75\_RcsF\_R89x\_R | cgttgatttgcatccgcttCTAtgcggttggaatg |
| RcsF\_R45x\_F | aaaccgaaagcgccgTAGgccacgccggtccga |
| RcsF\_R45x\_R | tcggaccggcgtggcCTAcggcgctttcggttt |
| RcsF\_Q79x\_F | tgccaggcctctaatTAGgactctccgccgagc |
| RcsF\_Q79x\_R | gctcggcggagagtcCTAattagaggcctggca |
| RcsF\_K98x\_F | atgcaaatcaacgcctctTAGatgaaagccaatgctgta |
| RcsF\_K98x\_R | tacagcattggctttcatCTAagaggcgttgatttgcat |
| RcsF\_E110x\_F | ttactgcatagctgcTAGgtcaccagcggtacg |
| RcsF\_E110x\_R | cgtaccgctggtgacCTAgcagctatgcagtaa |
| RcsF\_P116x\_F | gtcaccagcggtacgTAGggctgctatcgtcag |
| RcsF\_P116x\_R | ctgacgatagcagccCTAcgtaccgctggtgac |
| RcsF\_Q121x\_F | acgccaggctgctatcgtTaggctgtatgtatcggtt |
| RcsF\_Q121x\_R | aaccgatacatacagcctAacgatagcagcctggcgt |
| RcsF\_R242x\_F | ctgggttacaccgacTAGatcggttctgacgct |
| RcsF\_R242x\_R | agcgtcagaaccgatCTAgtcggtgtaacccag |
| KiDo87\_OmpA\_D246x\_F | catcggttctTAGgcttacaaccagg |
| KiDo88\_OmpA\_D246x\_R | gttgtaagcCTAagaaccgatgcgg |
| KiDo89\_OmpA\_Y248x\_F | ttctgacgctTAGaaccagggtc |
| KiDo90\_OmpA\_Y248x\_R | cctggttCTAagcgtcagaaccg |