**Supplementary File 1a: Bacterial strains and plasmids utilised in this study**

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|  | **Description** | **Source** |
| Strain |  |  |
| *K. pneumoniae* ECL8 | *K. pneumoniae* isolate derived from NCTC 00418 (StrepR) (AmpR) (RifR) |  (5) |
| *K. pneumoniae* ECL8 *sodA::aph* | *K. pneumoniae* ECL8 with the *sodA* gene replaced with a kanamycin *aph* cassette (KanR) | This study |
| *K. pneumoniae* ECL8 *ytfL::aph* | *K. pneumoniae* ECL8 with the *ytfL* gene replaced with a kanamycin *aph* cassette (KanR) | This study |
| *K. pneumoniae* ECL8 *ompA::aph* | *K. pneumoniae* ECL8 with the *ompA* gene replaced with a kanamycin *aph* cassette (KanR) | This study |
| *K. pneumoniae* ECL8 *fepB::aph* | *K. pneumoniae* ECL8 with the *fepB* gene replaced with a kanamycin *aph* cassette (KanR) | This study |
| *K. pneumoniae* ECL8 *fepD::aph* | *K. pneumoniae* ECL8 with the *fepD* gene replaced with a kanamycin *aph* cassette (KanR) | This study |
| *K. pneumoniae* ECL8 *exbB::aph* | *K. pneumoniae* ECL8 with the *exbB* gene replaced with a kanamycin *aph* cassette (KanR) | This study |
| *K. pneumoniae* ECL8 *exbD::aph* | *K. pneumoniae* ECL8 with the *exbD* gene replaced with a kanamycin *aph* cassette (KanR) | This study |
| *K. pneumoniae* ECL8 *wbbY::aph* | *K. pneumoniae* ECL8 with the *wbbY* gene replaced with a kanamycin *aph* cassette (KanR) | This study |
| plasmid |  |  |
| pKD4 | Used as a template for amplification of the kanamycin aph cassette for the construction of chromosomal mutations. |  (6) |
| pACBSCE | Arabinose inducible plasmid that encodes for λ-Red genes: gam, exo and bet llelic exchange vector with arabinose induction |  (7) |

**Supplementary File 1b: Primer nucleotide sequences for construction of *K. pneumoniae* chromosomal mutant strains.**

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| **Name** | **Primer sequence (5’-3’)** | **Description\*** |
| ompA\_F  | GCTAAACTGGGTTACCCGATCACTGACGATCTGGACATCTACACCCGTCTGGGCGGCATGGTGTAGGCTGGAGCTGCTTC | Forward primer for replacement of *ompA* with the kanamycin *aph* cassette |
| ompA\_R | GGGCATAAAAAAAACCCGCCGAAGCGGGTTTTTTTTTATCGGTTATAACTTAAGCCGCCGGCTGAGTTACCATATGAATATCCTCCTTAG | Reverse primer for replacement of *ompA* with the kanamycin *aph* cassette |
| ompA\_checkF | CAGCTTGGTGCTGGTGCGTTC | Forward check primer for confirmation of the correct disruption of *ompA* |
| ompA\_checkR | GCAAAATGTCGAGCCTGAAG | Reverse check primer for confirmation of correct disruption of *ompA* |
| sodA\_F | GGACAAACTGCTTACGCGGCGTTAACACTTGAGCCGCTCGACAATAATGGAGATGATTATGGTGTAGGCTGGAGCTGTTC | Forward primer for replacement of *sodA* with the kanamycin *aph* cassette |
| sodA\_R | GCGAGTCATCAGACTCGCTTCTCTTTTAGCGCAATGCAACCTTATTTTTTGGCGGCAAAACGCATATGAATATCCTCCTTAG | Reverse primer for replacement of *sodA* with the kanamycin *aph* cassette |
| sodA\_checkF | TGCCACAGGATGGCGAACCC | Forward check primer for confirmation of the correct disruption of *sodA* |
| sodA\_checkR | GGTCCCCATCGAGACCGAGA | Reverse check primer for confirmation of correct disruption of *sodA* |
| exbB\_F  | TGTCGTTTTGATATTATTGTGGGCAGATTTTGTGATTATCGTCGTGGAGATAGAGCGTGGTGTAGGCTGGAGCTGCTTC | Forward primer for replacement of *exbB* with the kanamycin *aph* cassette |
| exbB\_R | CGCCGTTATCGTCCAGGTTTTCATTAAGACGCATCGCCATAGCCGATCAACCTACCCGCATATGAATATCCTCCTTAG | Reverse primer for replacement of *exbB* with the kanamycin *aph* cassette |
| exbB\_checkF | GCTTTTCTATACCAGCGCACCG | Forward check primer for confirmation of the correct disruption of *exbB* |
| exbB\_checkR | GATGGGTTTTTCCGGTCGCGGT | Reverse check primer for confirmation of correct disruption of *exbB* |
| exbD\_F | CCAGCGGCGTGAAGCCGGTGCGCAGCGCGCAGAAATTACGGGTAGGTTGATCGGCTATGGTGTAGGCTGGAGCTGCTTC | Forward primer for replacement of *exbD* with the kanamycin *aph* cassette |
| exbD\_R | CAACAAAAAAAGGCCTGCACGCGGCCAGCCTTTGCAGAAACGCAAGCGGGTTATTTGGCCATATGAATATCCTCCTTAG | Reverse primer for replacement of *exbD* with the kanamycin *aph* cassette |
| exbD\_checkF | GTCCTCTGATTCTACGAGGCACG | Forward check primer for confirmation of the correct disruption of *exbD* |
| exbD\_checkR | AAATAAACCGGCGCCAGCAGCC | Reverse check primer for confirmation of correct disruption of *exbD* |
| ytfL\_F | CACATTTGAGTTATCAACTTCCCTTCCGAGGATCTGGCCTCAACGGTCAGAAAAGATATGGTGTAGGCTGGAGCTGCTTC | Forward primer for replacement of *ytfL* with the kanamycin *aph* cassette |
| ytfL\_R | GGCGGATGGTCATCCGCCCTTAGGAGAGAGAAAAGATTACGCTCAGGCGTTCTGGCTTTCCATATGAATATCCTCCTTAG | Reverse primer for replacement of *ytfL* with the kanamycin *aph* cassette |
| ytfL\_checkF | CTAGCCAGTGTGACAGCCGG | Forward check primer for confirmation of the correct disruption of *ytfL* |
| ytfL\_checkR | GCTATCGGCAGAGGGGCGTG | Reverse check primer for confirmation of correct disruption of *ytfL* |
| fepB\_F | CACAAAGTTGAAAATGAGACGCATTTATCACCTTTCAAATCAGGATGCGATGACGTGGTGTAGGCTGGAGCTGCTTC | Forward primer for replacement of *fepB* with the kanamycin *aph* cassette |
| fepB\_R | GCAGGCCGAGTGCCCGTCCTGATGGCGCAGCCCGCGTTAGCCGAACAGGCTGGAGAGCATATGAATATCCTCCTTAG | Reverse primer for replacement of *fepB* with the kanamycin *aph* cassette |
| fepB\_checkF | TGACGTTTCCATATCATCCTC | Forward check primer for confirmation of the correct disruption of *fepB* |
| fepB\_checkR | GCTGGCATTGTAGGCCGGGC | Reverse check primer for confirmation of correct disruption of *fepB* |
| fepD\_F | TGAATAAAATCGATAACGATAATTACTATCATTATCATATCAGGGATGTCAGTTATGGTGTAGGCTGGAGCTGCTTC | Forward primer for replacement of *fepD* with the kanamycin *aph* cassette |
| fepD\_R | GCAGACAGCTGGCTATCAGGCGGCGGGACGGGGCAATCACAGGCCACCTCCCCGCGGCATATGAATATCCTCCTTAG | Reverse primer for replacement of *fepD* with the kanamycin *aph* cassette |
| fepD\_checkF | GCGAGCGATAAAAACGGCGC | Forward check primer for confirmation of the correct disruption of *fepD* |
| fepD\_checkR | CCATTAACACCCGCGGCAGC | Reverse check primer for confirmation of correct disruption of *fepD* |
| wbbY\_F | ACTACTTCAATTCACTAATATCATAGAAAAGTCTAGGTTACAAAGGAAGGGTTACAATGGTGTAGGCTGGAGCTGCTTC | Forward primer for replacement of *wbbY* with the kanamycin *aph* cassette |
| wbbY\_R | GAAAGTTAATATTGTTTTTGCGGAGCCCTTTCGGGCCCCGAATATTACTTTATTTTAACCATATGAATATCCTCCTTAG | Reverse primer for replacement of *wbbY* with the kanamycin *aph* cassette |
| wbbY\_checkF | TTACACCATCACCAGCATTAC | Forward check primer for confirmation of the correct disruption of *wbbY* |
| wbbY\_checkR | TCCGGCTGAATTCATCCGAAG | Reverse check primer for confirmation of correct disruption of *wbbY* |

\*Check primers annealing ~200 bp upstream and downstream of the gene of interest were utilised for confirmation of mutant strains by PCR and sanger sequencing

**Supplementary File 1c:** **Primer nucleotide sequences for enrichment of the transposon junction (TKK\_F and TKK\_R) and the introduction of an inline barcode for multiplexed sequencing (TKK 6, 7, 8, 9)**

|  |  |
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| **Name** | **Primer sequence (5’-3’) \*** |
| TKK 6.1 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTCGTACGAGCTTCAGGGTTGAGATGTGTA |
| TKK 6.3 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTTACGTAAGCTTCAGGGTTGAGATGTGTA |
| TKK 7.2 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTGCTAGCTAGCTTCAGGGTTGAGATGTGTA |
| TKK 7.4 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTTAGCTAGAGCTTCAGGGTTGAGATGTGTA |
| TKK 8.2 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTATGCATGCAGCTTCAGGGTTGAGATGTGTA |
| TKK 8.3 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTCATGCATGAGCTTCAGGGTTGAGATGTGTA |
| TKK 8.4 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTCGTACGAGCTTCAGGGTTGAGATGTGTA |
| TKK 9.2 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTATCGATCGAAGCTTCAGGGTTGAGATGTGTA |
| TKK 9.3  | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTTCGATCGATAGCTTCAGGGTTGAGATGTGTA |
| TKK 9.4 | AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCTCGATCGATCAGCTTCAGGGTTGAGATGTGTA |
| TKK\_F | ACCTGCAGGCATGCAAGCTTCAGG |
| TKK\_R | GACTGGAGTTCAGACGTGTGCTCTTCCGATC |

\*The expected inline barcode is underlined