

**S1 Table. Primers used for screening extended-spectrum  $\beta$ -lactamase, plasmid AmpC determinants [48] as well as non- $\beta$ -lactam resistance determinants [49] in Multidrug-resistant Enterobacteriaceae recovered from hospital wastewater.**

Target genes	Primer sequences (5'–3')	Thermocycling conditions	Expected amplicon size (bp)
<i>bla</i> <sub>TEM</sub>	F: CATTTCGGTGTGCGCCCTTATTC R: CGTTCATCCATAGTTGCCTGAC	94 °C for 10 mins 30 cycles of	800
<i>bla</i> <sub>SHV</sub>	F: AGCCGCTTGAGCAAATTA AAC R: ATCCCGCAGATAAATCACCAC	94 °C for 40s 58 °C for 40s	713
<i>bla</i> <sub>OXA-1-like</sub>	F: GGCACCAGATTCAACTTTCAAG R: GACCCCAAGTTTCTGTAAAGTG	72 °C for 1 min 72 °C for 7 mins	564
<i>bla</i> <sub>CTX-M Group 1</sub>	F: TTAGGAARTGTGCCGCTGYA R: CGATATCGTTGGTGGTRCCAT	94 °C for 10 mins 30 cycles of	688
<i>bla</i> <sub>CTX-M Group 2</sub>	F: CGTTAACGGCACGATGAC R: CGATATCGTTGGTGGTRCCAT	94 °C for 40s 60 °C for 40s	404
<i>bla</i> <sub>CTX-M Group 9</sub>	F: TCAAGCTGCCGATCTGGT R: TGATTCTCGCCGCTGAAG	72 °C for 1 min 72 °C for 7 mins	561
<i>bla</i> <sub>PER</sub>	F: GCTCCGATAATGAAAGCGT R: TTCGGCTTGACTCGGCTGA		520
<i>bla</i> <sub>VEB</sub>	F: CATTTCGGATGCAAAGCGT R: CGAAGTTTCTTTGGACTCTG		648
<i>bla</i> <sub>FOX</sub>	F: CTACAGTGCGGGTGGTTT R: CTATTTGCGGCCAGGTGA	94 °C for 10 mins 30 cycles of	162
<i>bla</i> <sub>DHA</sub>	F: TGATGGCACAGCAGGATATTC R: GCTTTGACTCTTTCGGTATTTCG	94 °C for 40s 59 °C for 40s	997
<i>bla</i> <sub>ClT</sub>	F: CGAAGAGGCAATGACCAGAC R: ACGGACAGGGTTAGGATAGY	72 °C for 1 min 72 °C for 7 mins	538
<i>bla</i> <sub>EBC</sub>	F: CGGTAAAGCCGATGTTGCG R: AGCCTAACCCCTGATACA		683
<i>bla</i> <sub>IMP</sub>	F: TTGACTCCATTTACDG R: GATYGAGAATTAAGCCACYCT	94 °C for 10 mins 30X (94 °C for 40s; 55 °C for 40s; 72 °C for 1 min)	139

<i>bla<sub>VIM</sub></i>	F: GATGGTGTGGTTCGCATA R: CGAATGCGCAGCACCG	72 °C for 7 mins	390
<i>bla<sub>OXA-48-like</sub></i>	F: GCTTGATCGCCCTCGATT R: GATTTGCTCCGTGGCCGAAA	94 °C for 10 mins 30X (94 °C for 40s; 57 °C for 40s; 72 °C for 1 min) 72 °C for 7 mins	281
<i>aadA</i>	F:GTGGATGGCGGCCTGAAGCC R:AATGCCAGTCGGCAGCG	94 °C for 4 mins 30X (94 °C for 45s; 50 °C for 45s; 72 °C for 45s) 72 °C for 7 mins	525
<i>tetA</i>	F:GCTACATCCTGCTTGCCTTC R:CATAGATCGCCGTGAAGAGG	94 °C for 5 mins 35 cycles of	201
<i>tetB</i>	F: TTGGTTAGGGGCAAGTTTTG R:GTAATGGGCAATAACACCG	94 °C for 1 min 55 °C for 1 min	359
<i>tetC</i>	F:CTTGAGAGCCTTCAACCCAG R:ATGGTCGTCATCTACCTGCC	72 °C for 1.5 mins 72 °C for 5 mins	418
<i>tetD</i>	F:AAACCATTACGGCATTCTGC R:GACCGGATACACCATCCATC		300
<i>sul I</i>	F:TTCGGCATTCTGAATCTCAC R:ATGATCTAACCCCTCGGTCTC		822
<i>sul II</i>	F:CGGCATCGTCAACATAACC R:GTGTGCGGATGAAGTCAG	94 °C for 5 mins 30 cycles of	625
<i>catII</i>	F:ACACTTTGCCCTTTATCGTC R:TGAAAGCCATCACATACTGC	94 °C for 30s; 50 °C for 30s; 72 °C for 1.5 mins 72 °C for 5 mins	543

<sup>a</sup>Annealing position within the corresponding open reading frame (from the base A of start codon ATG).

<sup>b</sup>Y=T or C; R=A or G; S=G or C; D=A or G or T