|  |
| --- |
| Table S1. MICs for various β-lactams with *B. thailandensis* strains |
| Strain | *penA* allele*a* | MIC (μg/ml)*b,c* |
| AMX | AMX/CLA | CAZ | CTXM | CRX | CEF | MER |
| **Wild type** |
| E264 | *penA* | 36 | 6 | 1.75 | 6 | 16 | 18 | 0.75 |
|  |
| ***penA*- or *penA*\****d***-null mutant strains** |
| E264ΔP | *penA* | 4 | 1.5 | 0.75 | 1 | 0.5 | 3 | 0.75 |
| C69FΔP | *penA\**(C69F) | 3 | 2 | 0.75 | 1 | 0.25 | 3 | 0.5 |
| R164HΔP | *penA\**(R164H) | 4 | 2 | 0.75 | 1 | 0.38 | 3 | 0.5 |
| E166KΔP | *penA\**(E166K) | 4 | 2 | 0.75 | 1 | 0.38 | 2 | 0.5 |
| A172TΔP | *penA\**(A172T) | 4 | 2 | 1 | 1 | 0.38 | 3 | 0.75 |
|  |
| ***penA*-null mutants complemented by *penA* or *penA*\* carried by a vector pRK415K** |
| E264ΔP-C | pRK415K::*penA* | >256 | 48 | 2 | >32 | >32 | 64 | 0.75 |
| C69FΔP-C | pRK415K::*penA\**(C69F) | 48 | 1 | >256 | >32 | 24 | 48 | 1 |
| R164HΔP-C | pRK415K::*penA\**(R164H) | >256 | 4 | 192 | >32 | >32 | 64 | 0.75 |
| E166KΔP-C | pRK415K::*penA\**(E166K) | 32 | 1.5 | >256 | >32 | >32 | 24 | 1 |
| A172TΔP-C | pRK415K::*penA\**(A172T) | >256 | 2 | >256 | >32 | >32 | 64 | 1 |
|  |
| **Twenty nine mutants with *penA*\*** |
| C69F1 | C69F | 6 | 1.5 | 56 | 3.5 | 3 | 12 | 0.5 |
| C69Y1 | C69Y | 4 | 1.5 | 36 | 3 | 2 | 8 | 0.75 |
| N136D1 | N136D | 8 | 1.5 | 12 | 5 | 4 | 12 | 0.5 |
| N136K1 | N136K | 6 | 2 | 12 | 3 | 3 | 4 | 0.75 |
| N136T1 | N136T | 12 | 1 | 10 | 1.75 | 1.5 | 4 | 0.38 |
| L162F1 | L162F | 16 | 1.5 | 12 | 2.5 | 2 | 6 | 0.38 |
| R164C1 | R164C | 12 | 1.5 | 24 | 3 | 1.5 | 6 | 0.75 |
| R164H1 | R164H | 24 | 2 | 28 | 5 | 4 | 12 | 0.5 |
| R164L1 | R164L | 4 | 1.5 | 28 | 3 | 1.5 | 6 | 0.5 |
| R164S1 | R164S | 12 | 1.5 | 24 | 3.5 | 8 | 12 | 0.38 |
| E166G1 | E166G | 4 | 2 | 12 | 1.5 | 1.5 | 4 | 0.75 |
| E166K1 | E166K | 4 | 2 | 80 | 3.5 | 3 | 8 | 0.5 |
| E166D1 | E166D | 4 | 2 | 16 | 2 | 2 | 4 | 0.75 |
| L169R1 | L169R | 3 | 1.5 | 48 | 3.5 | 2 | 8 | 0.38 |
| L169Q1 | L169Q | 3 | 1.5 | 72 | 3.5 | 4 | 8 | 0.38 |
| L169P1 | L169P | 3 | 1.5 | 24 | 3 | 2 | 4 | 0.5 |
| N170H1 | N170H | 3 | 2 | 24 | 1.75 | 1.5 | 6 | 0.5 |
| N170Y1 | N170Y | 3 | 2 | 32 | 3.5 | 3 | 8 | 0.75 |
| N170K1 | N170K | 6 | 1.5 | 6 | 1 | 2 | 3 | 0.38 |
| T171P1 | T171P | 6 | 1.5 | 16 | 3 | 1.5 | 4 | 0.5 |
| A172T1 | A172T | 16 | 2 | 28 | 6 | 6 | 16 | 0.5 |
| A172V1 | A172V | 16 | 2 | 28 | 15 | 6 | 12 | 0.5 |
| A172E1 | A172E | 6 | 1.5 | 32 | 2 | 1 | 8 | 0.5 |
| A172P1 | A172P | 16 | 1.5 | 24 | 5 | 4 | 8 | 0.5 |
| P174L1 | P174L | 16 | 3 | 9 | 3 | 3 | 8 | 0.38 |
| P174S1 | P174S | 24 | 3 | 8 | 3.5 | 6 | 8 | 0.5 |
| D176N1 | D176N | 16 | 2 | 12 | 3 | 2 | 6 | 0.75 |
| D176G1 | D176G | 12 | 1.5 | 11 | 2.5 | 1.5 | 3 | 0.38 |
| D179N1 | D179N | 6 | 1.5 | 48 | 3.5 | 2 | 8 | 0.5 |

*a*Amino acid residues are denoted by single-letter codes and are numbered according to Ambler *et. al*. [[17](#_ENREF_17)].

*b*MICs were measured by the E-test.

*c*Abbreviations: AMX, amoxicillin; AMC, amoxicillin/clavulanic acid; CAZ, ceftazidime; CTXM, cefotaxime; CRX, ceftriaxone; CEF, cefepime; MER, meropenem; TcR, tetracycline resistance cassette.

*dpenA*\* represents a *penA* allele with a single nucleotide substitution in the coding region.