**S2 Table. Literature search.**

|  |  |
| --- | --- |
| Chromosomally encoded protein(locus tag of gene) | References |
| Antibiotic resistance | Hypermutation | Pathoadaptation |
| GyrA (PA3168)  | [1] |  | [2,3] |
| GyrB (PA0004)  | [1] |  | [2,3] |
| ParC (PA4964) | [1] |  |  |
| ParE (PA4967) | [1] |  |  |
| AmpC (PA4110) | [4-6] |  | [3,7] |
| AmpR (PA4109)  | [5,6] |  | [3] |
| AmpE (PA4521) | [5] |  |  |
| AmpD (PA4522) | [5] |  |  |
| AmpP (PA4218) | [8] |  |  |
| AmpDh2 (PA5485) | [9] |  |  |
| AmpDh3 (PA0807) | [9] |  |  |
| AmpG (PA4393) | [8,10] |  |  |
| RpoN (PA4462) | [6] |  |  |
| PonA (PA5045) | [11] |  |  |
| MrcB (PA4700) | [12] |  |  |
| PbpA (PA4003) | [12] |  |  |
| FtsI (PA4418) | [12] |  |  |
| PbpC (PA2272) | [12] |  |  |
| DacB (PA3047) | [13] |  |  |
| DacC (PA3999) | [13] |  |  |
| PbpG (PA0869) | [13] |  |  |
| NagZ (PA3005) | [14] |  |  |
| CreB (PA0463) | [15] |  |  |
| CreC (PA0464) | [15] |  |  |
| CreD (PA0465) | [15] |  |  |
| PoxB (PA5297) | [16] |  |  |
| OprD (PA0958)  | [17,18] |  | [2,3] |
| OXA-50 (PA5514) | [19] |  |  |
| Mpl (PA4020) | [20] |  | [2] |
| PIB-1 (PA5542) | [21] |  |  |
| Aph(3')-IIb (PA4119) | [22,23] |  |  |
| HpaA (PA4091) | [24] |  |  |
| DsbM (PA0058) | [25] |  |  |
| RplY (PA4671) | [26] |  |  |
| GalU (PA2023) | [26] |  |  |
| NuoA (PA2637) | [27] |  |  |
| NuoB (PA2638) | [27] |  |  |
| NuoD (PA2639) | [27] |  |  |
| NuoE (PA2640) | [27] |  |  |
| NuoF (PA2641) | [27] |  |  |
| NuoG (PA2642) | [26,27] |  |  |
| NuoH (PA2643) | [27] |  |  |
| NuoI (PA2644) | [27] |  |  |
| NuoJ (PA2645) | [27] |  |  |
| NuoK (PA2646) | [27] |  |  |
| NuoL (PA2647) | [27] |  |  |
| NuoM (PA2648) | [27] |  |  |
| NuoN (PA2649) | [27] |  |  |
| AmgS (PA5199) | [28] |  |  |
| PhoP (PA1179) | [29] |  |  |
| PhoQ PA1180) | [29] |  |  |
| PprA (PA4293) | [30] |  |  |
| PprB (PA4296) | [30] |  |  |
| MexA (PA0425)  | [31,32] |  | [2] |
| MexB (PA0426)  | [31,32] |  | [2,3] |
| MexC (PA4599) | [33] |  |  |
| MexD (PA4598) | [33] |  |  |
| MexE (PA2493) | [34] |  |  |
| MexF (PA2494) | [34] |  |  |
| MexH (PA4206) | [35] |  |  |
| MexI (PA4207) | [35] |  |  |
| MexJ (PA3677) | [36] |  |  |
| MexK (PA3676) | [36] |  |  |
| MexV (PA4374) | [37] |  |  |
| MexW (PA4375) | [37] |  |  |
| MexX (PA2019) | [32] |  |  |
| MexY (PA2018)  | [32] |  | [3,7] |
| MuxA (PA2528) | [38] |  |  |
| MuxB (PA2527) | [38] |  |  |
| MuxC (PA2526) | [38] |  |  |
| OprJ (PA4597) | [33] |  |  |
| OprM (PA0427) | [31,32] |  |  |
| OprN (PA2495) | [34] |  |  |
| OpmB (PA2525) | [38] |  |  |
| OpmD (PA4208) | [35] |  |  |
| NalC (PA3721) | [39] |  |  |
| NalD (PA3574)  | [40,41] |  | [2] |
| MexR (PA0424)  | [31,39] |  | [2] |
| ArmR (PA3719) | [39] |  |  |
| MexS (PA2491)  | [42,43] |  | [2] |
| MexT (PA2492) | [34,44] |  |  |
| MexZ (PA2020)  | [45] |  | [2] |
| ArmZ (PA5471) | [26,46] |  |  |
| MexL (PA3678) | [36] |  |  |
| MexG (PA4205) | [12] |  |  |
| MvaT (PA4315) | [43] |  |  |
| NfxB (PA4600)  | [33] |  | [2] |
| ParR (PA1799) | [46,47] |  |  |
| ParS (PA1798) | [46,47] |  |  |
| MutL (PA4946) |  | [48] | [3] |
| MutS (PA3620)  |  | [48] |  |
| MutY (PA5147) |  | [48] |  |
| MutT (PA4400) |  | [48] |  |
| MutU (PA5443) |  | [48] |  |
| MutM (PA0357) |  | [48] |  |
| MucA (PA0763) |  |  | [2] |
| VgrG (PA5266) |  |  | [2] |
| AlgU (PA0762) |  |  | [2] |
| PA2099 |  |  | [2] |
| WbpM (PA3141) |  |  | [2] |
| BifA (PA4367) |  |  | [2] |
| MorA (PA4601) |  |  | [2] |
| DnaX (PA1532) |  |  | [2] |
| PcoA (PA2065) |  |  | [2] |
| Tle1 (PA3290) |  |  | [2] |
| BetT (PA5291) |  |  | [2] |
| RbDA (PA0861) |  |  | [2] |
| PA2455 |  |  | [2] |
| PA0977 |  |  | [2] |
| LasR (PA1430) |  |  | [2] |
| PelA (PA3064) |  |  | [2] |
| WspE (PA3704) |  |  | [2] |
| WspA (PA3708) |  |  | [2] |
| PhzB1 (PA4211) |  |  | [2] |
| PA4311 |  |  | [2] |
| RetS (PA4856) |  |  | [2] |
| AceE (PA5015) |  |  | [2] |
| AceF (PA5016) |  |  | [2] |
| PilQ (PA5040) |  |  | [2] |
| HtrB (PA3242) |  |  | [2] |
| YkoM (PA3458) |  |  | [2] |
| PilD (PA4528) |  |  | [2] |
| PdxY (PA5516) |  |  | [2] |
| YecS (PA0313) |  |  | [2] |
| PA1471 |  |  | [2] |
| PA1677 |  |  | [2] |
| PvdS (PA2426) |  |  | [2] |
| PA2490 |  |  | [2] |
| PA2602 |  |  | [2] |
| PA3222 |  |  | [2] |
| PA3939 |  |  | [2] |
| PA4642 |  |  | [2] |
| PA4963 |  |  | [2] |
| PhaF (PA5060) |  |  | [2] |
| PA5177 |  |  | [2] |
| CmpR (PA5437) |  |  | [2] |

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