

Table S4. Growth rates and yields for various *S. pyogenes* mutants.

| Strains (alternate name) | Relevant Genotype | Growth Rate ^a (% yield) ^b | |
|--------------------------|---|---|------------|
| | | ThyB | C Medium |
| HSC5 | wild type (WT) | 43.8 (100) | 50.5 (100) |
| GCP688 | ClpX ⁻ | 52.9 (93) | 67.9 (104) |
| GCP1245 (ZC611) | SpxA1 ⁻ | 42.0 (83) | 54.2 (102) |
| GCP1033 | SpxA2 ⁻ | 41.4 (81) | 50.2 (101) |
| GCP711 | ClpX ⁻ /SpxA1 ⁻ | 58.0 (86) | 72.0 (105) |
| GCP726 | ClpX ⁻ /SpxA2 ⁻ | 41.1 (83) | 50.1 (105) |
| GCP729 | ClpX ⁻ /SpxA1 ⁻ /SpxA2 ⁻ | 85.1 (51) | 97.3 (85) |
| GCP1072 | SpxA1 ⁻ /SpxA2 ⁻ | 74.5 (62) | 83.0 (99) |
| GCP652 | ΩClpP | 60.8 (101) | 94.7 (75) |
| GCP1300 | ClpP:: <i>aad9</i> | 72.9 (103) | 91.0 (88) |

^aGrowth rates (doubling time in min.) are calculated from early logarithmic growth in indicated medium.

^bYields (% of WT) are calculated from overnight growth in indicated medium in comparison to WT.