**Supplementary file 1**:List of strains used in this study

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| **Name** | **Genotype and relevant features** | **Source** |
| BW25113 | (araD-araB)567 (rhaD-rhaB)568 lacZ4787(::*rrnB-3*) hsdR514 rph-1 (wild-type reference) | (Grenier et al., 2014) |
| *rseA* | BW25113 rseA::kan | This study  |
| *dolP* | BW25113 dolP::kan | This study  |
| *bamB* | BW25113 bamB::kan | This study |
| *bamB* *dolP* | BW25113 *bamB* dolP::kan | This study |
| dolP rseA | BW25113 dolP rseA::kan | This study |
| skp | BW25113 skp::kan | This study |
| dolP skp | BW25113 dolP skp::kan | This study |
| degP | BW25113 degP::kan | This study |
| dolP degP | BW25113 dolP degP::kan | This study |
| dolP-gfp | BW25113 dolP-gfp | This study |
| surA  | BW25113 surA::kan  | This study |
| ompA | BW25113 ompA::kan | This study |
| surA dolP-gfp | BW25113 surA::kan dolP-gfp | This study |
| bamB dolP-gfp | BW25113 bamB::kan dolP-gfp | This study |
| ompA dolP-gfp | BW25113 ompA::kan dolP-gfp | This study |
| ompC dolP-gfp | BW25113 ompC::kan dolP-gfp | This study |
| dolP bamD-mCherry | BW25113 dolP bamD-mCherry | This study |
| bamD-mCherry | BW25113 bamD-mCherry | This study |
| *dolP-gfp* nlpD-mCherry | BW25113 *dolP-gfp* nlpD-mCherry | This study |
| surA *dolP-gfp* nlpD-mCherry | BW25113 *dolP-gfp* nlpD-mCherry surA::kan | This study |
| *dolP-gfp* zipA-mCherry | BW25113 *dolP-gfp* zipA-mCherry | This study |
| JCM166  | MC4100 *arar/-* (*λatt-lom*)::*bla* P*BADyaeT araC* *yaeT* (BamA depletion strain) | (Wu et al., 2005) |
| LC-E75 | F– λ– *ilvG*– *rfb-50* *rph-1* *186attB*::P*tet-dcas9*, *attB::mCherry* | (Cui et al., 2018) |
| LC-E75 *dolP*  | LC-E75 *dolP::kan* | This study |