**Supplementary file 1.**

**Table S1 List of strains used in this study**

|  |  |  |
| --- | --- | --- |
| Strain | Genotype | Reference |
| BW25113 | F-, Δ(*araD*-*araB*)567, Δl*acZ*4787(::*rrnB*-3), lambda-, rph-1, Δ(*rhaD*-*rhaB*)568, *hsdR*514 | Baba *et al.* (2006) |
| JW1237 | *ΔoppC::kanR* | Baba *et al.* (2006) |
| JW3511 | *ΔdppC::kanR* | Baba *et al.* (2006) |
| JW1626 | *ΔdtpA::kanR* | Baba *et al.* (2006) |
| JW3463 | *ΔdtpB::kanR* | Baba *et al.* (2006) |
| JW4091 | *ΔdtpC::kanR* | Baba *et al.* (2006) |
| JW0699 | *ΔdtpD::kanR* | Baba *et al.* (2006) |
| JW3686 | *ΔtnaA::kanR* | Baba *et al.* (2006) |
| JW2975 | *ΔmetC::kanR* | Baba *et al.* (2006) |
| JW1614 | *ΔmalY::kanR* | Baba *et al.* (2006) |
| JW1285 | *ΔsapC::kanR* | Baba *et al.* (2006) |
| JW0590 | *ΔcstA::kanR* | Baba *et al.* (2006) |
| *ΔoppC* | *ΔoppC* | This study |
| *ΔdppC* | *ΔdppC* | This study |
| *ΔdtpA* | *ΔdtpA* | This study |
| *ΔdtpB* | *ΔdtpB* | This study |
| *ΔdtpC* | *ΔdtpC* | This study |
| *ΔdtpD* | *ΔdtpD* | This study |
| *ΔtnaA* | *ΔtnaA* | This study |
| ΔDB1 | *ΔoppC ΔdppC* | This study |
| ΔDB5 | *ΔdtpA ΔdtpB ΔdtpC ΔdtpD* | This study |