**Table S2: List of chromosome-loss strains identified in the *in vitro* and *in planta* experiments.** Strains described in detail in the main text are highlighted in **bold**.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Experiment** | **Strain name** | **Chromosome(s) lost** | **Strain name in main text**  | **Method used to confirm chromosome loss** |
| **progenitor** | **Zt09** | **18** | **Zt09**3) | **PCR, PFGE**1)**, WGS**2) |
| **progenitor** | **IPO323** | **-** | **IPO323**4) | **PCR, PFGE, WGS** |
| **progenitor** | **STIR04 1.1.1** | **-** | **Za17** | **PCR, PFGE, WGS** |
|  |  |  |  |  |
| **Zt09 *in vitro* liquid culture 18°C** |  |  |  |  |
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| **Zt09\_18\_1.1.38** |

 | **14 (18)** | **Zt09∆14**3) | **PCR, PFGE, WGS** |
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| **Zt09\_18\_1.1.45** |

 | **15 (18)** | **Zt09∆15** | **PCR, PFGE, WGS** |
|  | Zt09\_18\_1.1.51 | 14 (18) |  |  |
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| **Zt09\_18\_1.1.71** |

 | **21 (18)** | **Zt09∆21**3) | **PCR, PFGE, WGS** |
|  | Zt09\_18\_1.1.85 | 16 (18) |  | PCR, PFGE |
|  | Zt09\_18\_1.1.95 | 14 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.3 | 16 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.4 | 14 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.21 | 15 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.24 | 15 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.33 | 14 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.64 | 14 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.68 | 16 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.73 | 20 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.79 | 16 (18) |  | PCR, PFGE |
|  | Zt09\_18\_2.1.85 | 14 (18) |  | PCR, PFGE |
|  | Zt09\_18\_1.2.4 | 15 (18) |  | PCR, PFGE |
|  | **Zt09\_18\_1.2.18** | **20 (18)** | **Zt09∆20** | **PCR, PFGE, WGS** |
|  | Zt09\_18\_1.2.40 | 15 (18) |  | PCR |
|  | Zt09\_18\_1.2.48 | 15 (18) |  | PCR |
|  | Zt09\_18\_1.2.86 | 15 (18) |  | PCR |
|  | Zt09\_18\_1.2.89 | 16 (18) |  | PCR |
|  | Zt09\_18\_1.2.93 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.2.6 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.2.38 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.2.43 | 15 (18) |  | PCR |
|  | Zt09\_18\_2.2.64 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.2.70 | 16 (18) |  | PCR |
|  | Zt09\_18\_2.2.74 | 16 (18) |  | PCR |
|  | Zt09\_18\_1.3.40 | 14 (18) |  | PCR |
|  | Zt09\_18\_1.3.41 | 14 (18) |  | PCR |
|  | Zt09\_18\_1.3.92 | 16 (18) |  | PCR |
|  | Zt09\_18\_2.3.21 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.3.41 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.3.49 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.3.53 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.3.85 | 14 (18) |  | PCR |
|  | Zt09\_18\_2.3.86 | 16 (18) |  | PCR |
| **Zt09 *in vitro* liquid culture 28°C** |  |  |  |  |
|  | Zt09\_28\_1.1.1 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.2 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.4 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.5 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.6 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.8 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.10 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.11 | 14,21 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.1.12 | 14,20 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.1.13 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.14 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.15 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.17 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.1.19 | 14,20,21 (18) | **Zt09 28-1** | **PCR, PFGE, WGS** |
|  | Zt09\_28\_1.1.21 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.2 | 19 (18) |  | PCR |
|  | Zt09\_28\_2.1.3 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.4 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.6 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.7 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.8 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.9 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.10 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.11 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.12 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.14 | 14,20 (18) |  | PCR |
|  | Zt09\_28\_2.1.15 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.16 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.17 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.18 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.19 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.21 | 14,20,21 (18) |  | PCR |
|  | Zt09\_28\_2.1.22 | 20 (18) |  | PCR |
|  | Zt09\_28\_2.1.24 | 14,16 (18) |  | PCR |
|  | Zt09\_28\_2.1.25 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.26 | 14,20 (18) |  | PCR |
|  | Zt09\_28\_2.1.27 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.28 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.29 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.31 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.33 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.34 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.35 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.37 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.38 | 14,20 (18) |  | PCR, PFGE |
|  | Zt09\_28\_2.1.39 | 21 (18) |  | PCR, PFGE |
|  | Zt09\_28\_2.1.40 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.41 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.1.42 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.1 | 14,20 (18) |  | PCR |
|  | Zt09\_28\_1.2.2 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.3 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.4 | 14,15,16,19,20 (18) | **Zt09 28-2** | **PCR, PFGE, WGS** |
|  | Zt09\_28\_1.2.5 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.6 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.7 | 14,16 (18) | **Zt09 28-3** | **PCR, PFGE, WGS** |
|  | Zt09\_28\_1.2.8 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.9 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.10 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.11 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.12 | 14,15 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.2.15 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.16 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.17 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.18 | 14,15,20,21 (18) | **Zt09 28-4** | **PCR, PFGE, WGS** |
|  | Zt09\_28\_1.2.19 | 14,16 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.2.20 | 14,21 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.2.21 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.22 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.23 | 14,20 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.2.24 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.25 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.26 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.27 | 14,15 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.2.28 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.29 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.30 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.31 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.2.32 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.1 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.2 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.3 | 15 (18) |  | PCR |
|  | Zt09\_28\_2.2.4 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.5 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.6 | 15 (18) |  | PCR |
|  | Zt09\_28\_2.2.7 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.10 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.11 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.12 | 14,16 (18) |  | PCR |
|  | Zt09\_28\_2.2.13 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.14 | 14,16 (18) |  | PCR |
|  | Zt09\_28\_2.2.15 | 14,20 (18) |  | PCR |
|  | Zt09\_28\_2.2.16 | 14,15 (18) | **Zt09 28-5** | **PCR, PFGE, WGS** |
|  | Zt09\_28\_2.2.17 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.18 | 14,16 (18) |  | PCR |
|  | Zt09\_28\_2.2.19 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.20 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.21 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.22 | 14,15 (18) |  | PCR |
|  | Zt09\_28\_2.2.23 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.24 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.25 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.2.26 | 14,20 (18) |  | PCR |
|  | Zt09\_28\_2.2.27 | 19 (18) |  | PCR |
|  | Zt09\_28\_2.2.28 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.1 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.2 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.4 | 14,20 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.3.5 | 16,20 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.3.6 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.7 | 14,16 (18) |  | PCR, PFGE |
|  | Zt09\_28\_1.3.8 | 14,20 (18) |  | PCR |
|  | Zt09\_28\_1.3.11 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.13 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.14 | 14,20,21 (18) |  | PCR |
|  | Zt09\_28\_1.3.15 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.17 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.18 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.19 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.20 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.22 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.24 | 14,15 (18) |  | PCR |
|  | Zt09\_28\_1.3.27 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.28 | 14 (18) |  | PCR |
|  | Zt09\_28\_2.3.1 | 14,20 (18) |  | PCR |
|  | Zt09\_28\_1.3.3 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.5 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.6 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.7 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.9 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.11 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.12 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.13 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.14 | 14,21 (18) |  | PCR |
|  | Zt09\_28\_1.3.15 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.17 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.19 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.20 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.22 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.26 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.27 | 14,15 (18) |  | PCR |
|  | Zt09\_28\_1.3.28 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.29 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.30 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.32 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.33 | 14,19 (18) |  | PCR |
|  | Zt09\_28\_1.3.35 | 14 (18) |  | PCR |
|  | Zt09\_28\_1.3.36 | 14 (18) |  | PCR |
|  |  |  |  |  |
|  |  |  |  |  |
| **Zt09 *in vitro* on plate 18°C** |  |  |  |  |
|  | 2-08-005 | 16 (18) |  | PCR |
|  | 2-09-005 | 16 (18) |  | PCR |
|  | 2-14-005 | 16 (18) |  | PCR |
|  | 2-17-005 | 16 (18) |  | PCR |
|  | 2-01-005 | 21 (18) |  | PCR |
| **IPO323 *in planta*** |  |  |  |  |
|  | **A#101** | **14** | **IPO323∆14**4) | **PCR, PFGE, WGS** |
|  | A#52 | 15 |  | PCR |
|  | **B#56** | **15** | **IPO323∆15**4) | **PCR, PFGE, WGS** |
|  | B#181 | 15 |  | PCR |
|  | PycB F15 13 | 15 |  | PCR |
|  | PycB F15 52 | 15 |  | PCR |
|  | PycB F30 6 | 15 |  | PCR |
|  | **PycB E 29 57** | **16** | **IPO323∆16**4) | **PCR** |
|  | PycA E10#17 | 18 |  | PCR |
|  | **B#152** | **18** | **IPO323∆18**4) | **PCR, PFGE, WGS** |
|  | PycB F15 1 | 18 |  | PCR |
|  | PycB F15 75 | 18 |  | PCR |
|  | PycB F15 83 | 18 |  | PCR |
|  | PycB F30 43 | 18 |  | PCR |
|  | PycB F30 90 | 18 |  | PCR |
|  | **B#59** | **19** | **IPO323∆19**4) | **PCR, PFGE, WGS** |
|  | PycB F15 79 | 19 |  | PCR |
| **Za17 in vitro liquid culture 18°C** |  |  |  |  |
|  | **Za17\_2.46** | **unitig 24** | **Za∆24** | **PCR, PFGE, WGS** |
|  | **Za17\_2.61** | **unitig 49** | **Za∆49** | **PCR, PFGE, WGS** |
|  | **Za17\_2.69** | **unitig 51** | **Za∆51** | **PCR, PFGE, WGS** |
|  | Za17\_2.81 | unitig 49 |  | PCR, PFGE |
|  | Za17\_3.38 | unitig 51 |  | PCR, PFGE |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1)Pulsed-field gel electrophoresis

2)Whole genome sequencing

3)Strains used for *in vitro* growth assay

4)Strains used for *in vitro* and *in planta* phenotyping