**Supplementary Table 2:** Growth data of *M. acetivorans* strains shown in Figure 6

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *M. acetivorans* strains | Doubling time (Td) (hrs) | Max.OD600 (ODM)  | P value for WT vs mutants (Td/ODM) | P value for Δ*mmcA* vs Δ*ccm* mutants (Td/ODM) | P value for Δ*ccmABC* vs Δ*ccmE* mutants (Td/ODM) |
| Trimethylamine (TMA) as a growth substrate |
| WWM60 (WT) | 12.13 ± 0.04 | 1.29 ± 0.01 |  |  |  |
| Δ*mmcA* | 19.89 ± 0.44 | 1.14 ± 0.02 | 3.73E-05 (\*\*\*)/0.0013 ((\*\*) |  |  |
| Δ*ccmABC* | 20.08 ± 0.37 | 1.15 ± 0.02 | 2.70E-05 (\*\*\*)/0.0011 (\*\*) | 0.4661 (NS)/0.1832 (NS) |  |
| Δ*ccmE* | 20.19 ± 0.15 | 1.15 ± 0.01 | 2.21E-06 (\*\*\*)/0.0002 (\*\*) | 0.2523 (NS)/0.5187 (NS) | 0.3856 NS)/0.8431 (NS) |
| Methanol (MeOH) as a growth substrate |
| WWM60 (WT) | 10.11 ± 0.23 | 1.13 ± 0.00 |  |  |  |
| Δ*mmcA* | 27.23 ± 0.28 | 0.92 ± 0.00 | 6.66E-07 (\*\*\*)/8.30E-07(\*\*\*) |  |  |
| Δ*ccmABC* | 29.40 ± 0.58 | 0.90 ± 0.01 | 1.89E-05 (\*\*\*)/2.28E-05 (\*\*\*) | 0.0131(\*)/0.0477(\*) |  |
| Δ*ccmE* | 29.52 ± 0.28 | 0.90 ± 0.01 | 5.85E-08 (\*\*\*)/4.71E-06 (\*\*\*) | 6.06E-05 (\*\*\*)/0.0036(\*\*) | 0.7980 (NS)/0.0749(NS) |
| Acetate as a growth substrate |
| WWM60 (WT) | 77.93 ± 4.32 | 0.22 ± 0.01 |  |  |  |
| Δ*mmcA* | No growth observed# | - | - |  |  |
| Δ*ccmABC* | No growth observed# | - | - | - |  |
| Δ*ccmE* | No growth observed# | - | - | - | - |
| Dimethyl sulfide (DMS) as a growth substrate |
| WWM60 (WT) | 32.6 ± 0.55 | 0.35 ± 0.01 |  |  |  |
| Δ*mmcA* | 53.7 ± 5.66 | 0.26 ± 0.02 | 0.0247 (\*)/0.0053(\*\*) |  |  |
| Δ*ccmABC* | 51.1 ± 2.84 | 0.33 ± 0.00 | 0.0093 (\*\*)/0.0474 (\*) | 0.2515 (NS)/0.0248 (\*) |  |
| Δ*ccmE* | 41.6 ± 1.68 | 0.36 ± 0.00 | 0.0055 (\*\*)/0.4266 (NS) | 0.0876 (NS)/0.0215 (\*) | 0.0568 (NS)/0.0148 (\*) |

All data represent the mean ± standard deviation of at least 3 biological replicates at 37 °C

# No growth observed at 37 °C for 50 days

P > 0.05 (non-significant, NS); P ≤ 0.05 (\*); P ≤ 0.01 (\*\*); P ≤ 0.0001 (\*\*\*) using a two-sided Student’s t-test