

Table S3. Physiological characteristics of *P. putida* KT2440, *C. testosteroni* KF-1, and *C. testosteroni* T-2 grown on succinate or gluconate. NF indicates that the metabolites were not quantified in the extracellular medium. Data are expressed as mean \pm the standard deviation of three biological replicates.

*Biomass yield accounted for 2-ketogluconate as a substrate in addition to gluconate.

**Data in parentheses represent consumption rate for 2-ketogluconate.

	<i>P. putida</i> KT2440	<i>C. testosteroni</i> KF-1	<i>C. testosteroni</i> T-2
Succinate			
Growth rate (h ⁻¹)	0.98 \pm 0.05	0.67 \pm 0.05	0.62 \pm 0.04
Biomass yield (g _{CDW} g _{Substrate} ⁻¹)	0.53 \pm 0.07	0.40 \pm 0.06	0.28 \pm 0.08
Consumption rate (mmol g _{CDW} ⁻¹ h ⁻¹)	16.0 \pm 2.0	12.2 \pm 1.7	12.7 \pm 1.3
Secretions (mmol g _{CDW} ⁻¹ h ⁻¹)			
α -Ketoglutarate	0.16 \pm 0.04	0.027 \pm 0.003	3.5 \pm 2.4 x10 ⁻³
Citrate	1.4 \pm 0.5 x10 ⁻³	NF	NF
Fumarate	0.48 \pm 0.07	NF	NF
Malate	0.71 \pm 0.35	NF	NF
Pyruvate	0.10 \pm 0.04	NF	NF
Aspartate	0.015 \pm 0.002	NF	NF
Glutamate	0.16 \pm 0.03	5.6 \pm 0.7 x10 ⁻³	0.12 \pm 0.05 x10 ⁻³
Gluconate			
Growth rate (h ⁻¹)	0.64 \pm 0.05	0.38 \pm 0.01	0.53 \pm 0.01
Biomass yield (g _{CDW} g _{Substrate} ⁻¹)	0.23 \pm 0.01*	0.14 \pm 0.03	0.21 \pm 0.02
Consumption rate (mmol g _{CDW} ⁻¹ h ⁻¹)	15.5 \pm 1.8 (12.6 \pm 2.6)**	10.47 \pm 3.35	14.33 \pm 3.97
Secretions (mmol g _{CDW} ⁻¹ h ⁻¹)			
2-Ketogluconate	8.8 \pm 1.1	3.4 \pm 0.4	6.3 \pm 1.2
Succinate	5.3 \pm 3.9 x10 ⁻³	1.7 \pm 0.3 x10 ⁻³	8.2 \pm 1.0 x10 ⁻³
3-Phosphoglycerate	0.012 \pm 0.003	0.76 \pm 0.50 x10 ⁻³	1.1 \pm 0.9 x10 ⁻³
6-Phosphogluconate	1.7 \pm 0.4 x10 ⁻³	1.5 \pm 0.4 x10 ⁻³	1.8 \pm 0.7 x10 ⁻³
Pyruvate	NF	3.3 \pm 0.5 x10 ⁻³	2.6 \pm 0.6 x10 ⁻³
Glutamate	0.056 \pm 0.024	4.2 \pm 1.6 x10 ⁻³	0.047 \pm 0.008
Aspartate	NF	NF	4.9 \pm 0.4 x10 ⁻³