Table 4. Relative expression levels normalized to internal control gene, *acpP.* RT-PCR was used to measure the relative expression of various genes in different carbon source environments. The data is grouped according to carbon source. The numbers reported in the first two columns are the expression levels normalized to the internal control gene *acpP*. All values are reported as the mean +/- the standard deviation (where 9 replicates are used, see *Materials and Methods* for details). The fold changes are the ratios of the mean relative expression levels (Examined Carbon Source:Control Carbon Source) and the *t* value is calculated from a *t* test using the reported means and standard deviations. The last set of numbers compares the expression levels of the parental strain grown on D-malate to the dctA- mutant strain grown on D-malate, which has a longer lag and slower growth rate than the parental strain.

Gene	L-Lactate (Mean +/- StDev)	D-malate (Mean +/- StDev)	Fold Change	t-value
dctA	0.115905 +/- 0.056309	0.620336 +/- 0.174859	5.35	8.24
yeaU	0.00187 +/- 0.000886	1.076704 +/- 0.274165	575.63	11.76
yeaT	0.006472 +/- 0.001171	1.467273 +/- 0.613758	226.70	7.14
maeB	0.393093 +/- 0.295912	0.751541 +/- 0.233534	1.91	2.85
sfcA	0.198499 +/- 0.100837	0.222394 +/- 0.08623	1.12	0.54
dcuA	0.706904 +/- 0.34631	0.150467 +/- 0.095633	0.21	4.65
dcuB	0.041774 +/- 0.094029	0.053883 +/- 0.015946	1.29	0.38
dcuC	0.03394 +/- 0.021994	0.285734 +/- 0.146809	8.42	5.09
dcuD	0.021212 +/- 0.008379	0.146953 +/- 0.067468	6.93	5.55

Gene	L-Lactate (Mean +/- StDev)	L-galactonate (Mean +/- StDev)	Fold Change	t-value
yjjL	0.000089 +/- 0.000049	0.820319 +/- 0.230057	9247.91	10.70
yjjM	0.009443 +/- 0.005161	0.144605 +/- 0.121341	15.31	3.34
yjjN	0.000011 +/- 0.000006	0.043582 +/- 0.023637	4071.04	5.53

Gene	L-Lactate (Mean +/- StDev)	Propionate (Mean +/- StDev)	Fold Change	t-value
putP	0.128481 +/- 0.025258	0.3243 +/- 0.101079	2.52	5.64
ycjJ	0.000973 +/- 0.000511	0.034635 +/- 0.010364	35.59	9.73

Gene	L-Lactate (Mean +/- StDev)	5-Keto-D-Gluconate (Mean +/- StDev)	Fold Change	t-value
idnT	0.030182 +/- 0.002802	7.510811 +/- 0.339001	248.85	22.07

Gene	L-Lactate (Mean +/- StDev)	Thymidine (Mean +/- StDev)	Fold Change	t-value
tolC	0.036011 +/- 0.004306	0.050327 +/- 0.022983	1.40	1.84

Gene	D-malate BW25113 (Mean +/- StDev)	D-malate dctA- (Mean +/- StDev)	Fold Change	t-value
dcuA	0.150467 +/- 0.095633	0.981195 +/- 0.175591	6.52	12.46
dcuB	0.053883 +/- 0.015946	0.168018 +/- 0.145462	3.12	2.34
dcuC	0.285734 +/- 0.146809	0.022542 +/- 0.005665	0.08	5.37
dcuD	0.146953 +/- 0.067468	0.029928 +/- 0.010867	0.20	5.14

t value is calculated with a *t* test.
Degrees of Freedom = 2*(9-1) =16