Table S2

Biotin-dependent oxaloacetate decarboxylation activities of mutant RePCs in the absence of oxamate at different concentrations of oxaloacetate[a]

	addition[b]		[oxaloacetate] (μM)		
	enzyme	avidin	200	100	25
R548K					
k_{cat1}	+	+	4.01 ± 0.47	3.34 ± 0.22	1.83 ± 0.29
k_{cat2}	+	-	3.69 ± 0.57	3.55 ± 0.81	1.97 ± 0.10
% of activity dependent on biotin			0	0	0
Q552N					
k_{cat1}	+	+	3.43 ± 0.33	3.89 ± 0.44	1.19 ± 0.22
k_{cat2}	+	-	3.52 ± 0.50	3.50 ± 0.42	1.03 ± 0.40
% of activity dependent on biotin			0	0	0
Q552A					
k_{cat1}	+	+	2.38 ± 0.20	1.67 ± 0.09	0.75 ± 0.09
k_{cat2}	+	-	2.21 ± 0.27	1.63 ± 0.13	0.81 ± 0.17
% of activity dependent on biotin			0	0	0

[a]The apparent k_{cat} values are have units of min^{-1}. Reported values are means ± standard deviations, of three separate determinations. [b]Pyruvate carboxylase and avidin used for each reaction were 50 μg and 150 μg, respectively. [c]k_{cat1} is the apparent rate constant for biotin-independent oxaloacetate decarboxylation. [d] k_{cat2} is the apparent rate constant for biotin-dependent plus biotin-independent oxaloacetate decarboxylation and [f]Percent of activity dependent on biotin was calculated as $100(k_{cat2} - k_{cat1}) / k_{cat2}$. Statistical analysis showed that in all cases k_{cat1} and k_{cat2} were not significantly different using a T-test ($p > 0.05$).