

Supplementary Table S1 Concentrations (mM) of ^{13}C acetate and ^{13}C ethanol in *E. cloacae* SDM and its derivatives at 2 h and 6 h as well as the yield (mol/mol) of ^{13}C ethanol from ^{13}C acetate.

Strain	SDM	SDM ($\Delta budABC$)	SDM ($\Delta adhE$)
^{13}C Acetate (2 h)	8.04 $\pm$ 0.25	8.49 $\pm$ 0.52	8.01 $\pm$ 0.18
^{13}C Ethanol (2 h)	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
^{13}C Acetate (6 h)	0.29 $\pm$ 0.13	6.58 $\pm$ 0.20	6.97 $\pm$ 0.15
^{13}C Ethanol (6 h)	6.22 $\pm$ 0.49	0.56 $\pm$ 0.13	0.00 $\pm$ 0.00
Yield	0.80 $\pm$ 0.03	0.29 $\pm$ 0.02	0.00 $\pm$ 0.00