Supplementary Information

Biotechnological production of acetoin, a bio-based platform chemical, from lignocellulosic resource by metabolically engineered *Enterobacter cloacae*

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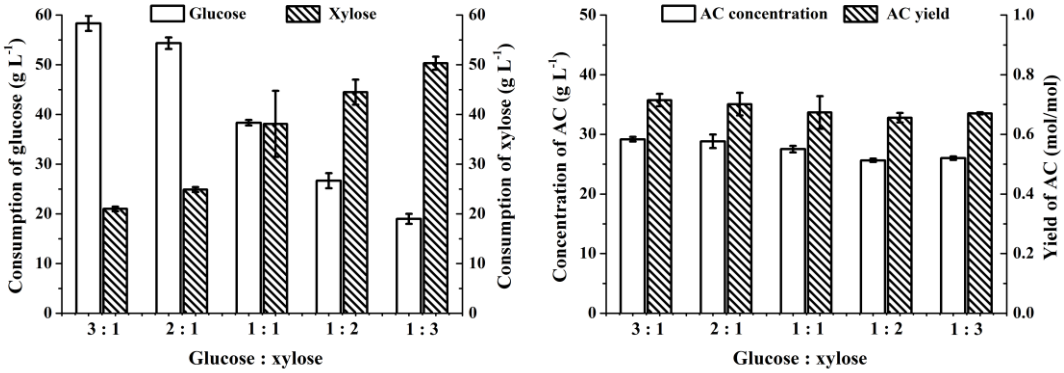

Fig. S1 Effect of different ratios of glucose to xylose on the production of AC.

The experiments were conducted in 500-mL Erlenmeyer flasks. The initial sugar (glucose and xylose) concentration was about 80 g L^{-1}. The flasks with 100 mL of the fermentation medium were incubated at 37°C on a rotary shaker at 180 rpm. Data are the means ± SDs from three parallel experiments.

Table S1 Primers used in this study

Primer	Sequence
PΔ*adhE*.f (*EcoRI*)	GCCGAGCTCATGGCTGTTACCAATATC
PΔ*adhE*.r (overlap)	GTGAACCCAGTTTGTATCAGATCTTTAGGTGCG
PΔ*adhE*.f (overlap)	ACCTAAAGATCTGATACAAACTGGGTTCACAGT
PΔ*adhE*.r (*XbaI*)	ATTATCTAGATCAGGCGCTTTTCTTCGC
NOX-f(*NdeI*)	CTTGCCATATGAAAGTCACAGTTGTTG
NOX-r(*SalI*)	CGTGCGTCGACTTAAGCGTTAACTGATTGGGC
NDH-f (*NdeI*)	CGTGCCATATGACTACGCCATTGAAAA
NDH-r(*SalI*)	CGTGCGTCGACTTAGTGCAGCTTCAGGCGCGGGC
VHb-f(*NdeI*)	CGTGCCATATGTTAGACCAGCAAACCAT
VHb-r(*SalI*)	CGTGCGTCGACTTATTCAACCGCTTGAGC
Promoter-f(*BglII*)	GTTCAGATCTCAATTCCGACGTCTAAG
Promoter-r(*XbaI*)	CTTGTCTAGAGGTCAGTGCGTCCTGCT
P_5-*nox*-f1(*BglII*)	AGATCTCAATTCCGACGTCTAAGAAGC
P_5-*nox*-r2	GTTTGAGACGTTTTAGATTTAAGCGTTAACTGATTGG
P_b-*galP*-f3	CCAATCAGTTAACGCTTAAATCTAAAACGTCTCAAAC
P_b-*galP*-r4(*SacI*)	GAGCTCTTAGTCGTGTGCGCCG

Table S2 Sequences of promoter library

Promoter	Sequence
P_1	caattccgacgtctaaggaaaccattatcatgacatcaacctataaaaataggcgtatcacgaggccctctcgtctccacctcaagctccctatctagtgatagcgattgacatccctatcagtgacggagatattgagcacatcagcaggacgcactgacc
P_2	caattccgacgtctaagaaaccattattatcatgacattaacctataaaaataggcgtatcacgaggccctttcgtcttcacctcgagtccctatcagtgatagagattgacctccctatcagtgatagagatactgagcacatcagcaggacgcactgacc
P_3	caattccgacgtctaagaagccattactatcatgacattaacctataggaataggcgtatcacggggcccttccgccttcacctcggatccctgtcagtgctagagattgacatccctaccggtgataaagatactgagcacatcagcaggacgcactgacc
P_4	caattccgacgtctaagaaaccattattatcatgacattagcctataaaaataggcgtaccacgaggccctttcgtcttcacctcgagtccctatcagtgatagagattgacacccctatcagtgatagagatactgagcacatcagcaggacgcactgacc
P_5	caattccgacgtctaagaagccattattatcatgacattaacctataaaagtaggcgtgtcacaaggccctttcgtcttcacctcgagtccctatcagcgatagagattgacatccctatcagtgaccgagatactgagcacatcagcaggacgcactgacc