

Supplementary Tables

Engineering *Escherichia coli* for anaerobic succinate fermentation using corn stover hydrolysate as a substrate

Haining Yang^{1,3,*} and Yali Dong²

¹School of Biological Engineering, Xinxiang University, Xinxiang 453003, P. R. China

²Xinxiang University, Xinxiang 453003, P. R. China

³National Engineering Laboratory for Cereal Fermentation Technology (NELCF), Jiangnan University, 1800 Lihu Road, Wuxi, Jiangsu 214122, P. R. China

* Corresponding author:

Haining Yang, Email: 591096799@qq.com;

29 **Table S1. The sequence after codon optimization.**

Name	Source	The sequence after codon optimization
Fdh	<i>Candida boidinii</i>	ATGAAAATTGTGCTGGTGCTGTATGATGCGGGCAAACATGCGGCGG ATGAAGAAAAACTGTATGGCTGCACCGAAAACAACTGGGCATTG CGAACTGGCTGAAAGATCAAGGCCATGAACTGATTACCACGAGCG ATAAAGAAGGCGGCAACAGCGTGCTGGATCAGCATATTCCGGATGC GGATATTATCATTACCACCCCGTTTCATCCGGCGTATATTACCAAAGA GCGCATTGATAAAGCGAAAAAACTGAAACTGGTGGTTGTGGCGGG CGTGGGCAGCGATCATATTGATCTGGATTATATTAATCAGACCGGCA AAAAAATTAGCGTGCTGGAAGTGACCGGCAGCAACGTGGTGAGCG TGGCGGAACATGTGCTGATGACCATGCTGGTGCTGGTGCGCAACTT TGTGCCGGCGCATGAACAGATTATTAACCATGATTGGGAAGTGGCG GCGATTGCGAAAGATGCGTATGATATTGAAGGCAAAACCATTGCGA CCATTGGCGCGGGCCGCATTGGCTATCGCGTGCTGGAACGCCTGGT GCCGTTTAACCCGAAAGAGCTGCTGTATTATGATTATCAAGCGCTGC CGAAAGATGCGGAAGAAAAAGTGGGCGCGCGCCGCGTGGA AAC ATTGAAGAACTGGTGGCGCAAGCGGATATTGTGACCATTAAACGCGC CGCTGCATGCGGGCACCAAAGGCCTGATTACAAAGAACTGCTGA GCAAATTTAAAAAAGGCGCGTGGCTGGTGAACACCGCGCGCGGCG CGATTTGCGTGGCGGAAGATGTGGCGGCCGCGCTGGAAAGCGGTC AGCTGCGCGGCTATGGCGGCGATGTGTGGTTTCCGCAGCCGGCGCC GAAAGATCATCCGTGGCGCGATATGCGCAACAAATATGGCGCGGGC AACGCGATGACCCCGCATTATAGCGGCACCACCCTGGATGCGCAGA CCCGCTATGCGGAAGGCACCAAAAACATTCTGGAAAGCTTTTTTAC CGGCAAATTTGATTATCGCCCGCAAGATATTATTCTGCTGAACGGCG AATATATCACGAAAGCCTATGGCAAACATGATAAAAAA

31 **Table S2. The detailed by-product levels of the succinate-producing strain were revealed after**
32 **the combined expression of genes.**

	Lactate (g/L)	Formate (g/L)	Acetate (g/L)	Ethanol (g/L)
B4	0.3±0.02	0.25±0.02	1.23±0.1	1.51±0.14
B41	0.02±0.01	0.22±0.06	1.16±0.09	1.43±0.21
B42	0.03±0.02	0.2±0.02	0.92±0.12	1.06±0.26
B43	0.02±0.03	0.15±0.03	0.72±0.08	1.04±0.14
B44	0.04±0.02	0.15±0.02	0.58±0.09	0.98±0.15
B45	0.02±0.03	0.13±0.02	0.55±0.12	0.92±0.24
B46	0.02±0.03	0.12±0.03	0.58±0.15	0.87±0.16

34 **Table S3. The detailed by-product levels of *E. coli* B47 were revealed upon the addition of**
35 **different concentrations of formate.**

	Lactate (g/L)	Formate (g/L)	Acetate (g/L)	Ethanol (g/L)
0	0.15±0.09	0	0.59±0.15	0.87±0.19
10	0.23±0.02	0	0.51±0.04	0.96±0.11
30	0.18±0.13	0	0.59±0.15	1.02±0.48
50	0.29±0.04	0.35±0.09	0.6±0.15	1.19±0.32
70	0.32±0.09	1.26±0.16	0.54±0.16	1.32±0.22
100	0.28±0.06	3.88±0.39	0.73±0.09	1.37±0.19
150	0.26±0.08	7.88±0.68	0.8±0.15	1.48±0.25
200	0.31±0.09	12.64±0.97	0.73±0.13	1.62±0.19