Table S1. Primers used for cloning.

RemoveFor	GCAGATATCCAGCACAGTGGCGGCCGCTCGAGTCTAGAGGGCCCTTCGAATGAGTTTAAACCCGCTGATCTGATAA CAACAGTGTAGATG
RemoveRev	CATCTACACTGTTGTTATCAGATCAGCGGGTTTAAACTCATTCGAAGGGCCCTCTAGACTCGAGCGGCCGCCACTG TGCTGGATATCTGC
CipA1For	CGGCCGCTCGAGAATGCAACACCGACCAAGGGAGC
CipA3Rev	GCGGGTTTAAACTCACGTAGAATCGAGACCGAGGAGAGGGTTAGGGATAGGCTTACCTTCGAAGGGCCCATTCGAA TCATCTGTCGGTGTTGTTACAGG
CipA3For	CGGCCGCTCGAGGTATCGGCGGCCACAATGACAGTCGAG
egl2For2	GAGAGAAGCTCATCATCACCATCACCATGGTCAGCAGACTGTCTGGGGCCA
egl2Rev2	GTAGAGGACCCACCTCCTCCAGATCCCCATGGCTTTCTTGCGAGACACG
cbh2For	GCAGAAGGCTCTTTGGACAAGAGAGAAGCTCGGCCGGATTATAAAGATGACGATGACAAACAAGCTTGCTCAAGCG TCTGGGGCCAATG
cbh2Rev	GTAGAGGACCCACCTCCTCCAGATCCCCATGGCAGGAACGATGGGTTTGCGTTTGTGAGAAGC
bgl1For3	GTTTTATTCGCAGCATCCTCCGCATTAGCTGCAGGTGAACAAAAACTCATCTCAGAAGAGGATCTGGATGAACTGG CGTTCTCTCCTCCATTCTATCCC
bgl1Rev3	CGTCGCCATTTACATCACCGTAAACAACCTGAGGAGAACCTCCACCGCCACTACCCCCGGGTTGCACCTTCGGGAG CGCTGCGTGAAGGGGC
BsaXIFor	GACCACACCTCTACCGGCATGACTAGCCAGCTTTTGTTCCCT
BsaXIRevRevised	GGAGAGCGCACGAGGGAGCT
GAL10For	CTGATTAATTACCCCAGAAATAAGGCTAAAAAACTAATCGCATTATCATC
GAL10RevRevised	CAAGACAATCAAAACCTTCATTTATATTGAATTTTCAAAAATTCTTACTTTTTTTTTGG
PreproForRevised	CCAAAAAAAAAGTAAGAATTTTTGAAAATTCAATATAAATGAAGGTTTTGATTGTCTTG
PreproRev	CCTAGGTACGTATTTGTCATCGTCATCTTTATAATCCGGCCGAGCTTCTCTCTTGTCC
DR1For	GATTATAAAGATGACGATGACAAATACGTACCTAGGAAAGAAGAACATGTGATCATCCAGGCCG
DR1Rev	CCATATGGGACCCACCTCCTCCAGATCCGAGCTCCTTGCTCTGTGCAGATTCAGATCG
C-mycFor	GAGCTCGGATCTGGAGGAGGTGGGTCCCATATGGAACAAAAACTCATCTCAGAAGAGGATCTGTGATGGACTTCTT CGCCAGAGGTTTGGTCAAGTCTC
ADH1Rev	AGGGAACAAAAGCTGGCTAGTCATGCCGGTAGAGGTGTGGTC
AGA2For	GGCAGTAACCTGGCCCCACAAACCTTCAAATGAACG
pYD1Rev	GTCGATTTTGTTACATCTACAC
9E-docStFor	CCATGGGGATCTGGAGGAGGTGGGTCCTCTACTAAATTATACGGCGACGTC

9E-docStRev	GACTTGACCAAACCTCTGGCGAAGAAGTCCATTAGTTCTTGTACGGCAATGTA
G1A2For1	GCGATTAGTTTTTTAGCCTTATTTCTGGGG
G1A2Rev1	ACCTGCAGCTAATGCGGAGGATGCTGCGAATAAAACTGCAGTAAAAATTGAAGGAAATCTCATGGTTTTTTCTCCT TGACGTTAAAGTATAGAGG
G1A2For2	CCTCAGGTTGTTTACGGTGATGTAAATGGCGACG
G1A2Rev2	GAGATCCGCTTATTTAGAAGTGTCGAATTCCTAATAAGGTAGGTGGGGTATGCTCTTTATC
G1A2For3	GAATTCGACACTTCTAAATAAGCGGATCTC
G1A2Rev3	GTAATACGACTCACTATAGGGCGAATTGGGCTCGAGGGCATGCGAAGGAAAATG
G10A1For1	GTACAGATCCCGACCCATTTGC
G10A1Rev1	CGCTTAACTGCTCATTGCTATATTGAAGTACGGATTAGAAGCCGCCGAGCGGGTGACAGC
G10A1For2	GTACTTCAATATAGCAATGAGCAGTTAAGCG
G10A1Rev2	ACCATGGTGATGGTGATGATGAGCTTCTCTCTTGTCCAAAGAGCC
G10A1For3	CCATGGGGATCTGGAGGAGGTGGG
G10A1Rev3	CTAAAGGGAACAAAAGCTGGCTAGTCATGCCGGTAGAGGTGTGGTC
G10A1For4	GACCACACCTCTACCGGCATGACTAGCCAGCTTTTGTTCCCTTTAG
G10A1Rev4	CCTGGTATCTTTATAGTCCTG
BGL1-ctrl-For	GGGCCCCCCCTCGAGGTCGACGGTATCGATACGGATTAGAAGCCGCCGAGCGGGTGACAG
BGL1-ctrl-Rev	CAATTAACCCTCACTAAAGGGAACAAAAGCTGGAGCTCCTCGAGGGCATGCGAAGGAAAATGAGAAATATCG
EGII-ctrl-For	GGGCCCCCCCTCGAGGTCGACGGTATCGATATCGCTTCGCTGATTAATTACCCCAG
EGII-ctrl-Rev	CAATTAACCCTCACTAAAGGGAACAAAAGCTGGAGCTCCATGCCGGTAGAGGTGTGGTCAATAAGAGC

Table S2. PCR fragment sets for plasmid construction using the DNA assembler method (1).

Template	Primer pairs	PCR product
pYD1	BsaXIFor/BsaXIRevRevised	F0
Yeast genomic DNA	GAL10For/GAL10RevRevised	F1
pRSGAL	PreproForRevised/PreproRev	F2
NW1	DR1For/DR1Rev	F3
Yeast genomic DNA	C-mycFor/ADH1Rev	F4
pYD1	AGA2For/pYD1Rev	F5
T. reesei cDNA	cbh2For/cbh2Rev	FLAG-CBHII
C. thermocellum genomic DNA	9E-docStFor/9E-docStRev	docS
pYD1	G1A2For1/G1A2Rev1	G1A2-HR1
A. aculeatus cDNA	bgl1For3 / bgl1Rev3	c-Myc-BGL1
C. thermocellum gDNA	G1A2For2/G1A2Rev2	docAt
Yeast genomic DNA	G1A2For3/G1A2Rev3	ADH2
pYD1	G10A1For1/ G10A1Rev1	G10A1-HR1
pRS425-CBHII	G10A1For2/ G10A1Rev2	G10A1-HR2
pRS425-CBHII	G10A1For3/ G10A1Rev3	G10A1-HR3
pYD1	G10A1For4/ G10A1Rev4	G10A1-HR4
T. reesei cDNA	egl2For2/ egl2Rev2	HisG-EGII
pRS425-CBHII-BGL1	BGL1-ctrl-For/BGL1-ctrl-Rev	BGL1-ctrl
pYD1-R1-EGII	EGII-ctrl-For/EGII-ctrl-Rev	EGII-ctrl

1. **Shao, Z., H. Zhao, and H. Zhao.** 2009. DNA assembler, an *in vivo* genetic method for rapid construction of biochemical pathways. Nucleic Acids Res **37:**e16.