

Figure S1. SDS-PAGE analysis of the sorted cells by FACS. After cell sorting, all 14 individual clones were cultured and soluble lysates were prepared by centrifugation following sonication. WT means wild type *C. glutamicum* harboring pCES-H36-GFP. Lanes 1 to 14: clones isolated by FACS screening. Lane M: molecular weight markers (kDa). Arrows indicate the GFP.

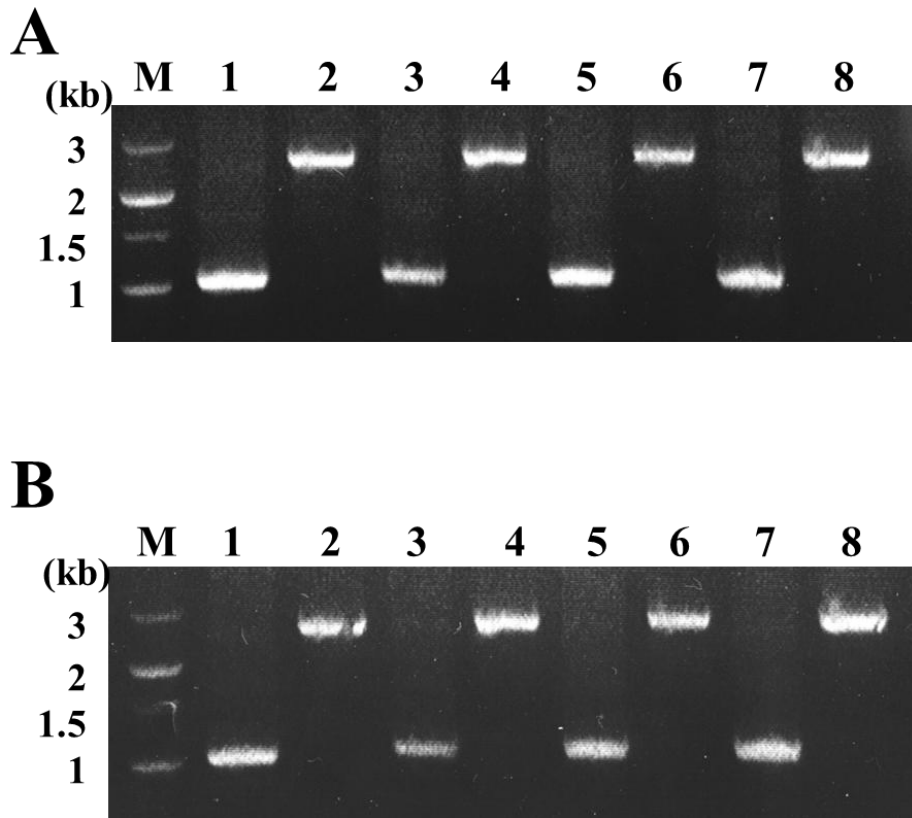


Figure S2. Confirmation of IS element deletion by agarose gel electrophoresis of PCR samples. (A) Confirmation of IS*Cg1* deletion. Odd number and even number lanes mean PCR product obtained from WJ004 and wild type *C. glutamicum*, respectively. Lanes 1 and 2, IS*Cg1a*; lanes 3 and 4, IS*Cg1b*; lanes 5 and 6, IS*Cg1d*; lanes 7 and 8, IS*Cg1e*. Lane M mean the DNA molecular size markers (kb). In WJ004 strain, IS*Cg1* (~2400 bp) was deleted in each position and the reduced size of PCR product could be obtained. (B) Confirmation of IS*Cg2* deletion. Odd number and even number lanes mean PCR product obtained from WJ008 and wild type *C. glutamicum*, respectively. Lanes 1 and 2, IS*Cg2b*; lanes 3 and 4, IS*Cg2c*; lanes 5 and 6, IS*Cg2d*; lanes 7 and 8, IS*Cg2f*. Lane M mean the DNA molecular size markers (kb). In WJ008 strain, IS*Cg2* (~2600 bp) was deleted in each position and the reduced size of PCR product could be obtained.

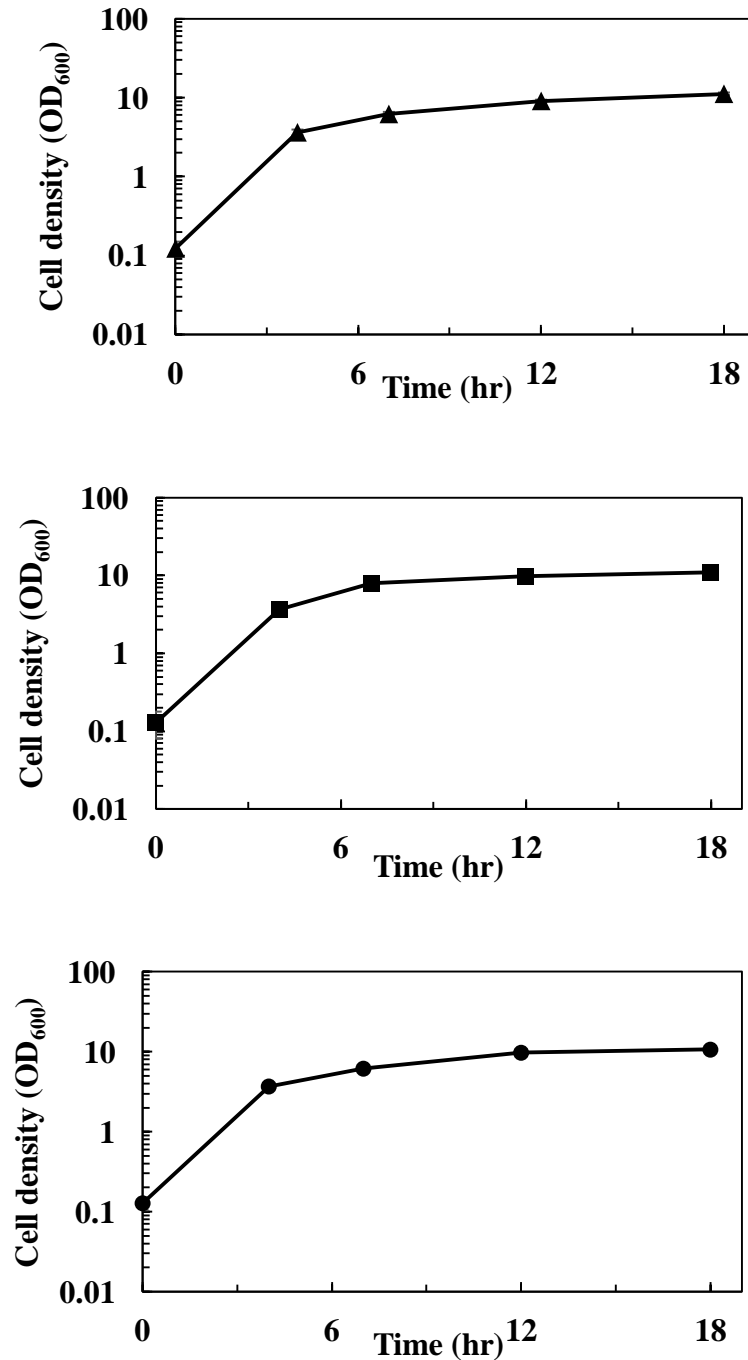


Figure S3. Growth profile of cells harboring pCES-H36-GFP. *C. glutamicum* WJ004 harboring pCES-H36-GFP and *C. glutamicum* WJ008 harboring pCES-H36-GFP are represented by squares (■) and circles (●), respectively. Triangles (▲) represent wild type *C. glutamicum* harboring pCES-H36-GFP, which was used as a positive-control.

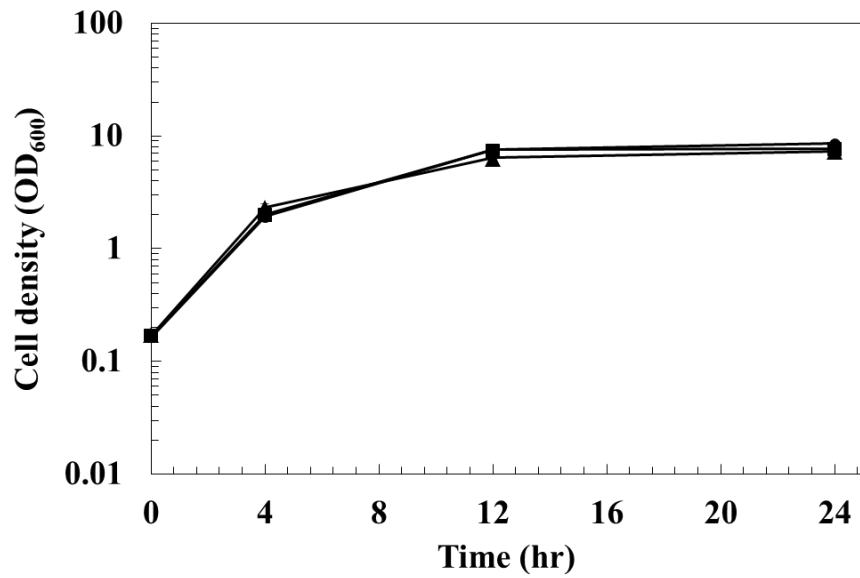
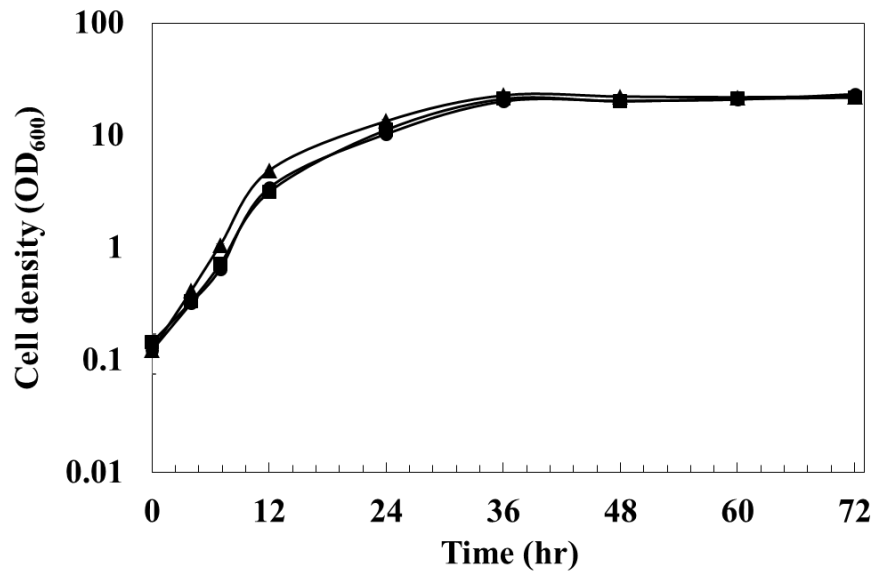
A**B**

Figure S4. Growth profile of cells harboring pCES-H36-PhaCAB or pHGmut. (A) *C. glutamicum* WJ004 harboring pCES-H36-PhaCAB and *C. glutamicum* WJ008 harboring pCES-H36-PhaCAB are represented by squares (■) and circles (●), respectively. Triangles (▲) represent wild type *C. glutamicum* harboring pCES-H36-PhaCAB, which was used as a positive-control. (B) *C. glutamicum* WJ004 harboring pHGmut and *C. glutamicum* WJ008 harboring pHGmut are represented by squares (■) and circles (●), respectively. Triangles (▲) represent wild type *C. glutamicum* harboring pHGmut, which was used as a positive-control

Table S1. List of primers used in the PCR experiments.

Primer name	Primer sequence (5' to 3') ^a
H36 porB F	ATAG TCGAC CGGTACCTCTATCTGGTGCC
H36 porB R	GTGTCATT CTAG ATGCGGAAGCAGGTGCT
Amy F	ATTAAT GGCCCAGCCGGCCA AGATGAACAAGTGTCAATGAAA GATG
Amy R	ATTAAT GGCCCCGAGGCC CTATTAATGATGGTGATGGTGAT GTTTTAGCCCATCTTTATTATAGTTTCCAGAT
IS amy F	TGACAC GGATCC ATGAAGCTTTCACACCCGCATCGATGTCAGGT CTTGCTGCG
IS amy R 1	GCTGCCACTGTGATGCCTGCGGTTGCTGCCATTGCTGTCAATCG GTGGATGCACC
IS amy R 2	GCTGTCAT CTAG ATGCGGAAGCAGGTGCTGCGAATGCTGCCAC TGTGATGCC
<i>ISCglA</i> A-F	TACGAC TCGAC CACTTCCAACCTGGCACGTT
<i>ISCglA</i> A-R	GGTTTACGGGCTCTTCCTGTTGGGTAGAGCCTTTTGTGGTGT
<i>ISCglA</i> B-F	ACACCAACAAAAGGCTCTACCCAACAGGAAGAGCCCGTAAAC C
<i>ISCglA</i> B-R	CGTCGAT CTAG ATGGTCAAAGCTTCCCCTGG
<i>ISCglB</i> A-F	ATCCAG TCGAC CCACTGTCTTCGAAGCACAAC
<i>ISCglB</i> A-R	GCTCTTAAGTGGCTCTTCCTGTTGGGTAGAGCCTTTTGTGGTG T
<i>ISCglB</i> B-F	ACACCAACAAAAGGCTCTACCCAACAGGAAGAGCCACTTAAG AGC
<i>ISCglB</i> B-R	GTGCTAT CTAG ACGGGCAAGCACACGTC
<i>ISCglD</i> A-F	TAGCAC TCGAC CCCATCTTTGTGGTGGCTG
<i>ISCglD</i> A-R	ATACGTTTACTGGCTCTTCCTGTTGGGTAGAGCCTTTTGTGGT G
<i>ISCglD</i> B-F	CACCAACAAAAGGCTCTACCCAACAGGAAGAGCCAGTAAACG TAT
<i>ISCglD</i> B-R	GTGCTAT CTAG AAATCATCACCTCCCGTGAAG
<i>ISCglE</i> A-F	TGACCAC CTGC AGAAGTCAACGACCGCAAGC
<i>ISCglE</i> A-R	CTGCCCCACAAATAAAAAACACCGCGAAGCAGAACTGC
<i>ISCglE</i> B-F	GCAGTTTCTGCTTCGCGGTGTTTTTTATTTGTGGGGCAG

ISCg1e B-R	GTGTCAT CTAGAG TTTCATCATTGCGGTCGACA
ISCg2b A-F	TAGCAC GTCTGACT CATGGTTCAGGGCACTG
ISCg2b A-R	TCGTACAATCTCCTAGGCGAATACCTTGATTGATCATGTCGAGG
ISCg2b B-F	CCTCGACATGATCAATCAAGGTATTCGCCTAGGAGATTGTACG A
ISCg2b B-R	TCGTGAT CTAGACT GCTCATGATTTCCCGCA
ISCg2c A-F	TAGCAC GTCTGAC CGCGCCCTGGCAATGC
ISCg2c A-R	CGGAACTGACGGCGAATACCTTGATTGATCATGTCGAGGAAA
ISCg2c B-F	TTTCCTCGACATGATCAATCAAGGTATTCGCCGTCAGTTCCG
ISCg2c B-R	GTCTGAT CTAGAG TCTCCTAGGCGTTCCTACT
ISCg2d A-F	TGACAC GTCTGACT TTTCGTGATCCTGGGTGG
ISCg2d A-R	GCATAATAGGGACGGCGAATACCTTGATTGATCATGTCGAGGAA AA
ISCg2d B-F	TTTCCTCGACATGATCAATCAAGGTATTCGCCGTCCTATTATG C
ISCg2d B-R	GTGCTAT CTAGA ATCACTCACCATCATCGGC
ISCg2f A-F	TAGCAC GTCTGAC ACTGCCCCCTCTGGAAATG
ISCg2f A-R	CATCCAACCTAGGGCGAATACCTTGATTGATCATGTCGAGG
ISCg2f B-F	CCTCGACATGATCAATCAAGGTATTCGCCCTAGGTTGGATG
ISCg2f B-R	GTGTCAT CTAGAC GATGGAATAATCAGACTCTGGAAC
Confirm ISCg1 A F	ATGAAGTCTACCGGCAACAT
Confirm ISCg1 A R	TCCACCCCAATGACATACAC
Confirm ISCg1 B F	GCCGGCAACGCCT
Confirm ISCg1 B R	TTAGAGTGCATTGATCTTATGGACC
Confirm ISCg2 A F	ATGTCAGGTCTTGCTGCG
Confirm ISCg2 A R	TTGATTTTCATCAGCAAATAACGGCA
Confirm ISCg2 B F	CAGAAGTTGCTGATCGTGCT
Confirm ISCg2 B R	TCAATCGGTGGATGCACC
PhaC F	AGGATCC ATGGCGACCGGCAAAGG
PhaC R	CTCTAGAT CACCGTTCGTGCACG
PhaA F	ATGCTAT CTAGAAAAGGAGGAAAAT CATGACTGACGTTGTCATC GTATC
PhaA R	GATGCAG CGGCCG CCTTATTTGCGCTCGACTGCCA
PhaB F	CGATAC CGGCCG CAAAGGAGGAAAATC ATGACT CAGCGCATT GCG
PhaB R	AGAT GCGGCCG CTCAGCCCATATGCAGGC

^aRestriction enzyme sites and ribosome binding sites are shown in bold and italic.

