Electronic Supplementary Information

Development of bio-chemical route to C5 plasticizer synthesis using glutaric acid produced by metabolically engineered *Corynebacterium* glutamicum

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Primer	Sequence (5'-3')	Purpose	
DavB _{His} -F	<u>GGATCC</u> ATG CAC CAT CAT CAC CAT CAC ATGAACAAGAAGAATCGACACC	DavB _{His}	
DavB _{His} -R	GCGGCCGC TTAATCTGCCAGGGCGATCGGG	avB _{His} A)	
DavA-F	GCGGCCGCAGGAGATATACATATGCGCATCGCACTGTACCAAGAGGAGATATACAT	DavA	
DavA-R	GCGGCCGC TTAGCCTTTACGCAGGTGCAGC	avB _{His} A)	
DavT-F	GGATCCAGGAGATATACATATGAGCAAAACCAACGAATCCTTGAGGAGATATACAT	DavT	
DavT-R	CCTGCAGG TTAGGCGATTTCAGCGAAGCAC	vT D)	
DavD-F	CCTGCAGG AGGAGATATACAT ATGCAGCTCAAAGACGCTCAG	DavD	
DavD-R	AAGCTT TTAGACGCTGATGCACAGGTATTT	(pBL/12H30Da vT D)	
DapB _{mut} -F	AAGCTT AGGAGATATACATATGCATGATGCAAACATCCGC	CAAACATCCGC DapB _{mut} (pBL712H30Da vTD DapBmut)	
DapB _{mut} -R	AAGCTT TTACAAATTATTGAGATCAAGTACATC		

 Table S1. Primers used in this study. The restriction enzyme sites are underlined.

Table 52. qr CK primers used in this study.				
Primer	Sequence (5'-3')	Purpose		
DavB _{His} -F	CGACCTGCCACAACTGTTTC	DevP		
DavB _{His} -R	TTCCAAAGTTCCTTCAGGCG	DavB _{His}		
DavA-F	ATTGAGTATTGCGGGCAGAG	DeviA		
DavA-R	AATCGGTCAGGTAGGGAAAC	DavA		
DavT-F	CGAATCCTTGATGCAACGTC	DevT		
DavT-R	GATCACGGTCGAGTTCTTCG	— Davi		
DavD-F	CCAAGGTCCAGGAACACATC	DevD		
DavD-R	GTACGTCAACCAGGATGGTC			

Table S2. qPCR primers used in this study.

Activated carbon	Hazen unit (HU)	
CLD	97.7	
SLD	77.5	
CDLS	65.9	
PDCL	79.9	
SPW200-A	58.4	
Control	148.1	

Table S3. Changes in APHA color of extracted fermentation broth after treatment with various activated carbons



Figure S1. L-Lysine, 5-AVA, and glutaric acid production by recombinant *C. glutamicum* KCTC 1857, GTA-1, GTA-2, and GTA-3 strains. All flask cultures were done in triplicates. The measurements were presented as mean \pm standard deviation.



Figure S2. Analysis of transcriptional levels of davT, davD, davB, and davA genes in recombinant *C. glutamicum* GTA-1 and GTA-2 strains. All experiments were done in triplicates. The measurements were presented as mean \pm standard deviation.