Table 1: Features added to the high density microarray used for transcriptome analysis of *P. putida* S12 strains.

Feature name	Accession number	Description
arpA_s_at	AF183959.1	Antibiotic resistance pump, periplasmic linker protein (arpA)
arpB_at	AF183959.1	Antibiotic resistance pump, inner membrane transporter protein (arpB)
arpB_s_at	AF183959.1	Antibiotic resistance pump, inner membrane transporter protein (arpB)
arpC_s_at	AF183959.1	Antibiotic resistance pump, outer membrane channel protein (arpC)
arpR_s_at	AF183959.1	Antibiotic resistance pump regulator (arpR)
nagR_at	AF036940	Ralstonia sp. U2 plasmid pWWU2. LysR-like regular protein (nagR)
neo_at	U32991.1	Escherichia coli mini-Tn5 kanamycin transposon; neomycin phosphotransferase
orf1ISS12_at	AF292393.1	Pseudomonas putida insertion sequence ISS12, putative transposase subunit 1 (orf1)
orf2ISS12_at	AF292393.1	Pseudomonas putida insertion sequence ISS12, putative transposase subunit 2 (orf2)
pal_at	X12702	R.toruloides mRNA for L-phenylalanine ammonia-lyase (PAL)
porinS12_at	AF360363.1	Pseudomonas putida S12 isolate KL46F8 putative porin gene, complete cds
porinS12_s_at	AF360363.1	Pseudomonas putida S12 isolate KL46F8 putative porin gene, complete cds
S12AroP1_at		Pseudomonas putida S12 genes bottle neck aromatic amino acid synthesis: aroP1
S12AroP1_s_at		Pseudomonas putida S12 genes bottle neck aromatic amino acid synthesis: aroP1
S12AroP2_s_at		Pseudomonas putida S12 genes bottle neck aromatic amino acid synthesis: aroP2
S12DAHP1_s_at		Pseudomonas putida S12 genes bottle neck aromatic amino acid synthesis: dahp(1)
S12DAHP2_s_at		Pseudomonas putida S12 genes bottle neck aromatic amino acid synthesis: dahp(2)
S12PProt_s_at		Pseudomonas putida S12 genes bottle neck aromatic amino acid synthesis: P-protein
S12tktA_s_at		Pseudomonas putida S12 genes bottle neck aromatic amino acid synthesis: tktA
SMOS12_at	Y13349	Pseudomonas putida gene encoding styrene monooxygenase
srpA_at	AF029405.1	Pseudomonas putida solvent transporter, periplasmic linker protein (srpA)
srpB_at	AF029405.1	Pseudomonas putida solvent transporter, inner membrane transporter protein (srpB)
srpC_at	AF029405.1	Pseudomonas putida solvent transporter, outer membrane channel protein (srpC)
srpR_at	AF061937.1	Pseudomonas putida solvent transporter regulator (srpR)

srpS_at	AF061937.1	Pseudomonas putida solvent transporter regulator (srpS)
todA_at	J04996.1	P.putida toluene dioxygenase. Reductase (todB)
todB_at	J04996.1	P.putida toluene dioxygenase. Ferredoxin (todB)
todC1_at	J04996.1	P.putida toluene dioxygenase. Iron-sulfur protein, large subunit (todC1)
todC2_at	J04996.1	P.putida toluene dioxygenase. Iron-sulfur protein, small subunit (todC2)
todD_at	J04996.1	P.putida toluene dioxygenase. Cis-toluene dihydrodiol dehydrogenase (todD)
tolres1_at	AF362907.1	Pseudomonas putida S12 isolate KL56H11 putative binding protein component of ABC sugar transporter
tolres10_at	AF362898	Pseudomonas putida S12 isolate KL55E10 toluene-induced genomic sequence
tolres11_at	AF362897	Pseudomonas putida S12 isolate KL53C11 toluene-induced genomic sequence
tolres12_at	AF362896	Pseudomonas putida S12 isolate KL46F6 toluene-induced genomic sequence
tolres12_s_at	AF362896	Pseudomonas putida S12 isolate KL46F6 toluene-induced genomic sequence
tolres13_x_at	AF362895	Pseudomonas putida S12 isolate KL36F12 toluene-induced genomic sequence
tolres14_at	AF362894	Pseudomonas putida S12 isolate KL40B6 toluene-induced genomic sequence
tolres14_s_at	AF362894	Pseudomonas putida S12 isolate KL40B6 toluene-induced genomic sequence
tolres15_at	AF362893	Pseudomonas putida S12 isolate KL50B8 toluene-induced genomic sequence
tolres16_at	AF362892	Pseudomonas putida S12 isolate KL63F10 toluene-induced genomic sequence
tolres16_s_at	AF362892	Pseudomonas putida S12 isolate KL63F10 toluene-induced genomic sequence
tolres17_at	AF362891	Pseudomonas putida S12 isolate KL63A12 toluene-induced genomic sequence
tolres17_s_at	AF362891	Pseudomonas putida S12 isolate KL63A12 toluene-induced genomic sequence
tolres18_at	AF362890	Pseudomonas putida S12 isolate KL55D3 toluene-induced genomic sequence
tolres19_at	AF362889	Pseudomonas putida S12 isolate KL54C2 toluene-induced genomic sequence
tolres2_at	AF362906	Pseudomonas putida S12 isolate KL45C10 toluene-induced genomic sequence
tolres20_at	AF362888	Pseudomonas putida S12 isolate KL53G2 toluene-induced genomic sequence
tolres20_x_at	AF362888	Pseudomonas putida S12 isolate KL53G2 toluene-induced genomic sequence
tolres21_at	AF361469	Pseudomonas putida S12 isolate KL65B9 toluene-induced genomic sequence
tolres21_s_at	AF361469	Pseudomonas putida S12 isolate KL65B9 toluene-induced genomic sequence

tolres22_at	AF361468	Pseudomonas putida S12 isolate KL31F11 toluene-induced genomic sequence
tolres22_s_at	AF361468	Pseudomonas putida S12 isolate KL31F11 toluene-induced genomic sequence
tolres22_x_at	AF361468	Pseudomonas putida S12 isolate KL31F11 toluene-induced genomic sequence
tolres3_at	AF362905	Pseudomonas putida S12 isolate KL49B5 toluene-induced genomic sequence
tolres3_s_at	AF362905	Pseudomonas putida S12 isolate KL49B5 toluene-induced genomic sequence
tolres4_s_at	AF362904	Pseudomonas putida S12 isolate KL54C6 toluene-induced genomic sequence
tolres5_s_at	AF362903	Pseudomonas putida S12 isolate KL52B10 toluene-induced genomic sequence
tolres6_at	AF362902	Pseudomonas putida S12 isolate KL50F9 toluene-induced genomic sequence
tolres6_s_at	AF362902	Pseudomonas putida S12 isolate KL50F9 toluene-induced genomic sequence
tolres6_x_at	AF362902	Pseudomonas putida S12 isolate KL50F9 toluene-induced genomic sequence
tolres7_at	AF362901	Pseudomonas putida S12 isolate KL59A10 toluene-induced genomic sequence
tolres7_s_at	AF362901	Pseudomonas putida S12 isolate KL59A10 toluene-induced genomic sequence
tolres7_x_at	AF362901	Pseudomonas putida S12 isolate KL59A10 toluene-induced genomic sequence
tolres8_at	AF362900	Pseudomonas putida S12 isolate KL63E6 toluene-induced genomic sequence
tolres9_at	AF362899	Pseudomonas putida S12 isolate KL60D3 toluene-induced genomic sequence
tolres9_x_at	AF362899	Pseudomonas putida S12 isolate KL60D3 toluene-induced genomic sequence
tpl_at	U25347	Pantoea agglomerans tyrosine phenol-lyase (tpl) genes, complete cds
trpA_at	AF360362.1	Pseudomonas putida S12 isolate KL55D8. Toluene exclusion pump membrane transport protein (trpA)
trpA_s_at	AF360362.1	Pseudomonas putida S12 isolate KL55D8. Toluene exclusion pump membrane transport protein (trpA)
trpB_s_at	AF360362.1	Pseudomonas putida S12 isolate KL55D8. Toluene exclusion pump periplasmic transport protein (trpB)
trpC_at	AF360362.1	Pseudomonas putida S12 isolate KL55D8. Toluene exclusion pump outer membrane transport protein (trpC)
trpC_s_at	AF360362.1	Pseudomonas putida S12 isolate KL55D8. Toluene exclusion pump outer membrane transport protein (trpC)
trpR_at	AF360362.1	Pseudomonas putida S12 isolate KL55D8. Toluene exclusion pump regulator (trpR)
xylA_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylB_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylC_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence

xylE_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylF_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylG_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylH_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylI_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylJ_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylK_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylL_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylM_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylN_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylQ_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylR_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylS_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylT_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylU_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylW_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylX_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylY_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence
xylZ_s_at	NC_003350	Pseudomonas putida plasmid pWW0, complete sequence

Table 2: Primers used for construction of gene disruption plasmids and nucleotide sequence analysis.

Name	**Sequence**[a]	**Template**
Gene disruption plasmid primers:		
JW5	GCGTCTAGACTCAGGTCGAGGTGGCCCGG	*tetA*
JW6	GCGTCTAGAGAATTCTCATGTTTGACAGCTTATC	*tetA*
NW13f	CAGCGGCCGCATGTCGAAAATCATGCACGCG	PP3433 (*hpd*)
NW14r	GCGGATCCCAGGGCACCCAGTATCAGCAG	PP3433 (*hpd*)
NW4r	GCTCTAGAAGTTGAAGTCGATGTCGTAGATAG	PP3433 (*hpd*)
NW5f	GCTCTAGACCTACTGGGCCGGGTTCTA	PP3433 (*hpd*)
JW155	GCGCGGCCGCATGAAAACTCAGGTTGCAATTATTGG	PP3537 (*pobA*)
JW156	GCGTCTAGACTGTTTCAGCACGCCCTCCGGG	PP3537 (*pobA*)
JW157	GCGTCTAGACGCCAGTCAATCACGAGTTGATC	PP3537 (*pobA*)
JW158	GGGCTCGAGTCAGGCAACTTCCTCGAACGGC	PP3537 (*pobA*)
MW27	GCGGGATCCATGAGTGGACAAAACATGCATTCAG	pp4495 (*aroP1*)
MW28	GCGTCTAGAACGGTCTTTGGCTTGTCGGCC	pp4495 (*aroP1*)
MW29	GCGTCTAGAATCAACCAGGTCATCTACCGTATC	pp4495 (*aroP1*)
MW30	GCGGCGGCCGCTTACTTGGCCACAGTCTCAACAGC	pp4495 (*aroP1*)
4489.1F	GCGGGATCCGCGGGCTCATCTCCCCTACCCC	PP4490 (*phhA*)
4490.1R	GCGCAATTGGGTGAGGGCTTTTCTTGTTATGTGC	PP4490 (*phhA*)
4490.2F	GCGCAATTGGTGGAACACCCTGATCACCCGCC	PP4490 (*phhA*)
4491.1R	GCGGCGGCCGCCTTCCGGCCTTCAGCCGTTTCCG	PP4490 (*phhA*)
Nucleotide sequencing primers:		
SP7	ATGAGCATCCGCCGCACC	PP1362 (*pykA*)
SP8	TCAACCGACCAGCGGATCAC	PP1362 (*pykA*)

SP9	ATGAACCAACCGTGGAGCCC	PP1866
SP10	TTAGCGCCGTACCTGCTTGA	PP1866
SP11	TTGGCGGCCGGCACCC	PP2324 (*aroF-1*)
SP12	TCAGCCGCGCTTACGCTG	PP2324 (*aroF-1*)
SP13	ATGCACGCTTCCAGCCTCG	PP3080 (*aroF-2*)
SP14	CTACAGTTTTTGTGCCGCCTC	PP3080 (*aroF-2*)
SP15	ATGAGCCAGCAAGCCATCCT	PP0074 (*aroE-1*)
SP16	TCAGGTGAAACTGGCAAAGTGC	PP0074 (*aroE-1*)
SP17	ATGAGCGACCGCTACGCAG	PP3002 (*aroE-2*)
SP18	CTACTCCAAGGGAATCGTCAG	PP3002 (*aroE-2*)
SP19	ATGAACCGCGAAGAATTCCTGC	PP0417 (*trpE*)
SP20	TTATCTGGCGGAAGTCTGCTC	PP0417 (*trpE*)
SP23	ATGGCTGACATGTCCGAACAG	PP1769 (*pheA*)
SP24	TCAAAGCACCGCCTTCGGATAA	PP1769 (*pheA*)
SP25	ATGGCAACGATCAGAGCAAGG	PP2170
SP26	TCACGATGCTGAAGCCTCATC	PP2170
NW7f	TCGAGCAGATCAGCCAGGA	PP1770
NW8r	GAATGCCAGCAAGCGATACAG	PP1770
SP29	ATGAAACAGACGCAATACGTGGC	PP4990 (*phhA*)
SP30	TCAGGCAGCGACCTTGGGT	PP4990 (*phhA*)
SP31	ATGAGCCTGTTTTCCGCTGTC	PP1972 (*tyrB-1*)
SP32	TTACAGCACTTCCACGATCGCTT	PP1972 (*tyrB-1*)
SP33	GTGTTCAAACATGTCGATGCCTAT	PP3590 (*tyrB-2*)
SP34	TTACTTCTGAACGGCAGCGAAC	PP3590 (*tyrB-2*)
SP35	ATGAACCGCGACACGTCGC	PP4621 (*hmgA*)
SP36	TTATCTCCGGTTCGGGTTGAAG	PP4621 (*hmgA*)
tpl(f)1	GCAGACCACCGACATCCT	*tpl*
tpl(f)2	AAGACCACCAGCAGATTCAAG	*tpl*
tpl(f)3	GTGGGCAGCCTGTTTCAATG	*tpl*
tpl(r)4	GAAAGGCTCGGCAGGATAG	*tpl*
tpl(r)5	AAGCCGCCGATATTCACCAGA	*tpl*
tpl(r)6	CTCGCCCTGGTGAGACAT	*tpl*
RT-qPCR primers:		
PP1376F1	ATCTTCTCTGGCACCTATGG	PP1376 (*pcaK*)
PP1376R1	AGGAGGTAGACGATCACCAG	PP1376 (*pcaK*)
PP1377F1	ATGAAGAGCCAGTACGGTGT	PP1377 (*pcaF*)
PP1377R1	CACGCGAAACCTGATAGTC	PP1377 (*pcaF*)
PP1380F2	CGGTACGTGACGCTGATTAT	PP1380 (*pcaD*)
PP1380R2	GTACTCGGCACCTTGGATAC	PP1380 (*pcaD*)
PS122406 F1	CGGGCTGAACATTACTTACC	PP2406
PS122406 R1	AGCACCACGGTGTTTACC	PP2406
PP2407F1	CCCTTATTCTCGTGCTCAAC	PP2407

PP2407R1	ATCCAGTCGATCAGTTCACC	PP2407
PP2554F1	CTCAGTGAGCTGGCGTACTA	PP2554
PP2554R2	GCTGGATGATCTCGAAGAAG	PP2554
PP2608F1	GAGGTTCCACTGAACTGGTC	PP2608
PP2608R2	GGTATCCGCAAAGCTGTC	PP2608
PP2826F1	CGGGTCAACTACTTGCTGAT	PP2826
PP2826R1	AGAAGTCATCCAGGGTGATG	PP2826
PP3537F1	CTCCGACGTCAACTACCTGT	PP3537 (*pobA*)
PP3537R1	GTCAGCTTCCTGCATCTTCT	PP3537 (*pobA*)
PP3951F1	AGTCCGACTCCTACGTGTTC	PP3951 (*pcaI*)
PP3951R1	CATCGATCTCACGGGTTT	PP3951 (*pcaI*)
PP4656F1	CCCTTACGCCTGACTACAAG	PP4656 (*pcaH*)
PP4656R1	GAAGTTCAGCAGCAGGTCAT	PP4656 (*pcaH*)

a: Underlined sequences indicate a restriction site that was added to the primer.