

Strain	Genotype	Reference
BT5482	WT <i>B. thetaiotaomicron</i> (gentamycin ^R)	Lab stock.
BT5482 Δtdk	As BT5482 with Δtdk	(Koropatkin et al., 2008)
SM135 AKA HPX-	As BT5482 $\Delta tdk \Delta katE1 \Delta ahpC1 \Delta rbr1-1 \Delta rbr2-1$	(Mishra & Imlay, 2013)
WM6026	<i>E. coli laclq, rrnB3, DElacZ4787, hsdR514, DE(araBAD)567, DE(rhaBAD)568, rph-1 att-lambda::pAE12-del (oriR6K/cat::frit5), del 4229(dapA)::frit, del(endA)::frit, uidA(delMlul)::pir(wt), attHK::pJK1006::del1/2(del oriR6K-cat::frit5, del trfA::frit)</i>	(Blodgett, 2007)
BW19851	<i>E. coli rp4-2(Km::Tn7, Tc::Mu-1) $\Delta uidA::pir+$ recA1 hsdR17 creC510 endA1 thiE1</i>	(Metcalf, 1994)
Top10	<i>F- mcrA $\Delta(mrr-hsdRMS-mcrBC) \phi 80lacZ\Delta M15 \Delta lacX74 recA1 araD139 \Delta(araA-leu)7697 galU galK rpsL endA1 nupG$</i>	Invitrogen #V43001
MK462	As TOP10 with pBAD/His A/pfor of <i>B. thetaiotaomicron</i>	This study
MK466	As BW19851 with pExchange- <i>pfl2955</i> (BT_2955)	This study
MK470	As BW19851 with pExchange- <i>fdx</i> (BT_2414)	This study
MK474	As BW19851 with pExchange- <i>pfor</i> (BT_1747)	This study
MK482	As BW19851 with pExchange- <i>rnf</i> (BT_0616 to BT_0622 in <i>rnf</i> operon)	This study
MK486	As BW19851 with pExchange- <i>hyd3472</i> (BT_3472)	This study
MK490	As BW19851 with pExchange- <i>hyd1834</i> (BT_1834)	This study
MK494	As BT5482 Δtdk with $\Delta pfl2955$ (BT_2955)	MK466 X BT5482 Δtdk
MK500	As BT5482 Δtdk with $\Delta hyd3472$ (BT_3472)	MK486 X BT5482 Δtdk
MK508	As BT5482 Δtdk with $\Delta pfor$ (BT_1747)	MK474 X BT5482 Δtdk
MK520	As BT5482 Δtdk with Δrnf (BT_0616 to BT_0622 in <i>rnf</i> operon)	MK482 X BT5482 Δtdk
MK526	As BW19851 with pExchange- <i>pfl4738</i> (BT_4738)	This study
MK532	As BT5482 Δtdk with Δfdx (BT_2414)	MK470 X BT5482 Δtdk
MK540	As BT5482 Δtdk with $\Delta hyd1834$ (BT_1834)	MK622 X BT5482 Δtdk
MK550	As BT5482 Δtdk with $\Delta pfl4738$ (BT_4738)	MK526 X BT5482 Δtdk
MK556	As SM135 with $\Delta pfl4738$ (BT_4738)	MK526 X SM135
MK562	As SM135 with $\Delta pfl2955$ (BT_2955)	MK466 X SM135

MK570	As SM135 with $\Delta hyd1834$ (BT_1834)	MK490 X SM135
MK592	As SM135 with $\Delta pfor$ (BT_1747)	MK474 X SM135
MK580	As SM135 with $\Delta hyd3472$ (BT_3472)	MK486 X SM135
MK584	As SM135 with Δrnf (BT_0616 to BT_0622 in <i>rnf</i> operon)	MK482 X SM135
MK616	As WM6026 with pExchange- <i>fdx</i> (BT_2414)	This study
MK624	As WM6026 with pExchange- <i>pfor</i> (BT_1747)	This study
MK626	As WM6026 with pExchange- <i>pfl4738</i> (BT_4738)	This study
MK628	As WM6026 with pExchange- <i>pfl2955</i> (BT_2955)	This study
MK630	As MK508 with $\Delta pfl2955$ (BT_2955)	MK628 X MK508
MK635	As MK550 with $\Delta pfor$ (BT_1747)	MK624 X MK550
MK644	As MK494 with $\Delta pfl4738$ (BT_4738)	MK626 X MK494
MK654	As SM135 with Δfdx (BT_2424)	MK616 X SM135
MK622	As WM6026 with pExchange- <i>hyd1834</i> (BT_1834)	This study
LZ01 AKA SOD-	As BT5482 Δtdk with $\Delta sod1$ (BT_0655)	(Lu et al., 2018)
LZ200 AKA pSOD	As BT5482 Δtdk with pNLY- <i>B.thetaiotaomicron sod1</i> (BT_0655)	lab stock
LZ62	As BT5482 Δtdk with Δfum (BT_2256)	(Lu et al., 2018)

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Supplementary Table 1. The strains used in this study.

Plasmid	Genotype	Reference
pExchange- <i>tdk</i>	Derivative of pKNOCK- <i>bla-ermGb</i> carrying cloned <i>tdk</i>	(Koropatkin et al., 2008)
pNLY- <i>sod</i> _{BT}	pNLY plasmid constitutively expressing <i>B. thetaiotaomicron</i> <i>sod</i> from its own promoter and RBS (520 bp upstream of the gene)	(Lu et al., 2018)
pBAD/HisA- <i>pfor</i> _{BT}	pBAD/HisA plasmid (Invitrogen, catalog number V430-01) overexpressing <i>pfor</i> gene from <i>B. thetaiotaomicron</i>	This study

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Supplementary Table 2. The plasmids used in this study.

Primer		Sequence
<i>pfor</i>-deletion	F1	5' TTGTTCTAGA ACCTGCAGACAGGAATGAAATTCCG3'
	R1	5'TAGTCGAAGAAGGAGTGATGGG3'
	F2	5'ATCACTCCTTCTTCGACTAGAAACAATATCCTGCTGAAGC G3'
	R2	5' TTGTGGATCC GTATTATGAAAGCTACCGATCAGGCCAT3'
<i>pfl4738</i>-deletion	F1	5' TTGTTCTAGAT CACGCTTCTTTTCCAGGGCCTTTC3'
	R1	5'TCTTCTGCCAACGCTTCGAGGC3'
	F2	5'TCGAAGCGTTGGCAGAAGAGCTATACGATGCCATGGAGC3'
	R2	5' TTGTGGATCC ATCCTTGGGAACGGATTAAAGAATGCCC3'
<i>pfl2955</i>-deletion	F1	5' TTGTTCTAGA ACCGCAACTCCAGTATATTGAAGAC3'
	R1	5' CCACCCGTCC ATAGTCATCTTC3'
	F2	5'GATGACTATGGACGGGTGGAAGATCCTGCCGGATATCCGGAA3'
	R2	5' TTGTGGATCC ACTGAGCGAAACTCCAGATAATCAATTC3'
<i>fdx</i>-deletion	F1	5' TTGTTCTAGAT TTTCGATTCGGAAAGCAAT3'
	R1	5'TTCGTTCCGGCAAAAATAAAGC3'
	F2	5'TATTTTTGCCGAACGAAGTTTGCCCGTCTGAAGCTATT3'
	R2	5' TTGTGTCGAC CGAACATATCAATTATATCGGTGCACAT3'
<i>rnf</i>-deletion	F1	5' TTGTTCTAGACA ATCTGAAATATATTGCGCAG3'
	R1	5' CGATTCTCAC CGACAGATGAG3'
	F2	5'TCTGTCGGTGAGAATCGACCCTGGTGAAGATTCCGAA3'
	R2	5' TTGTGTCGAC ACCGGAAGCTATTGTATCACGGATAA3'
<i>hyd1834</i>-deletion	F1	5' TTGTTCTAGAC CTCTTTATCACAAACTCCGGCA3'
	R1	5' CTCAATAGGG AGACGGTCAATTTTT3'
	F2	5' ACCGTCTCC CTATTGAGACGACATTGTTTCAGGACGTC3'
	R2	5' TTGTGTCGAC TACAGACGGAAGATGGATAATAAAAAGGA3'
<i>hyd3472</i>-deletion	F1	5' TTGTTCTAGAG AAAACAAGTATTACGAGTTCCCGGA3'
	R1	5' AAAAGGCAGAA AGCCAGGGA3'
	F2	5'CTGGCTTTCTGCCTTTTTGCTCTGCCTATTGGGTCAC3'
	R2	5' TTGTGTCGAC GCATCAAAAGTTCCGCTTCATAGAAAGTACG3'
<i>pfor</i>-overexpression	F	5' ATACTCGAG ACTAAACAGAAGAAATTCATCAC3'
	R	5' ATAGGTAC CTTATTCAGCTGTATCAGCTCC3'

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Supplementary Table 3. The primers used in this study. The bold regions are restriction enzyme cut sites.