

Table 1: Plasmids used in this study.

Plasmid Name	Descriptive Name	Backbone	Enzymes	Insert construction/PCR description	5' UTR	5' UTR Sequence (Modification from WT indicated by capital letters or dashes to represent deletions)
Tn7:<i>lacZ</i> constructs						
pKR68	Tn7_ <i>lacZ</i>	pMP749	BamHI/ HindIII	PCR of <i>lacZ</i> from pEX-pigR:: <i>lacZ</i>	-	-
pKR74	Tn7_ <i>Ptul4_pdpA</i> UTR_ <i>lacZ</i>	pKR68	KpnI/NotI	Overlap extension PCR. Both <i>pdpA</i> 5'UTR and <i>tul4</i> promoter amplified from LVS gDNA	<i>pdpA</i>	agttatgttctaattaagtagacaat gatagcagtaaaagat
pKR84	Tn7_ <i>Ptul4_pdpA</i> UTR_mut1_ <i>lacZ</i>	pKR68	KpnI/NotI	PCR of <i>pdpA</i> 5'UTR from pKR74; modifications encoded on primers	<i>pdpA</i>	agttatgttctaattaagtaCTcaat gatTgcagtaaaagat
pKR85	Tn7_ <i>Ptul4_pdpA</i> UTR_mut2_ <i>lacZ</i>	pKR68	KpnI/NotI	PCR of <i>pdpA</i> 5'UTR from pKR74; modifications encoded on primers	<i>pdpA</i>	agttatgtActGattaagtagacaa tgatagcagtaaaagat
pKR98	Tn7_ <i>Ptul4_pdpA</i> UTR_badSD- <i>lacZ</i>	pKR68	KpnI/NotI	PCR of <i>pdpA</i> 5'UTR from pKR74; modifications encoded on primers	<i>pdpA</i>	agttatgttctCCtCCATCAac aatgatagcagtaaaagat
pKR99	Tn7_ <i>Ptul4_pdpA</i> UTR_ideal_movedSD- <i>lacZ</i>	pKR68	KpnI/NotI	PCR of <i>pdpA</i> 5'UTR from pKR74; modifications encoded on primers	<i>pdpA</i>	agttatgAAGGAGGTCCAT CAacaatgatagcagtaaaagat
Tn7:<i>lacZ</i> with R6ky origin						
pKR88	Mini_Tn7_R6Kg	pKR55	NspI	R6Kλ origin from pKL91	-	

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pKR89	Tn7_Ptul4_tul4 UTR_lacZ_R6Kg	pKR88	BamHI/KpnI / NotI	PCR of <i>tul4</i> promoter and 5'UTR from LVS gDNA; <i>lacZ</i> amplified from pKR68; three-way ligation	<i>tul4</i>	gagtatatgtgaatatttaaaaatag gagtatctatatgaaaaaataatt aag
Tn7:<i>lacZ</i> with 2μ origin						
pKR128	pYES2_Tn7_lacZ	pKR68	DraI/ PstI	<i>ura3</i> gene and 2μ origin digested from pYES2	-	
pKR129	pYES2_Tn7_Ptul4_pdpA UTR_idealS D-lacZ	pKR128	NotI/KpnI	PCR of <i>pdpA</i> 5'UTR from pKR74; modifications encoded on primers	<i>pdpA</i>	agttatgttctAAGGAGGTCA acaatgatagcagtaaaagat
pKR130	pYES2_Tn7_Ptul4_pdpA UTR_tul4 S D-lacZ	pKR128	NotI/KpnI	PCR of <i>pdpA</i> 5'UTR from pKR74; modifications encoded on primers	<i>pdpA</i>	agttatgttctaAGGAGTATCa caatgatagcagtaaaagat
pF-GFP constructs						
pKR145	pF- <i>tul4</i> UTR-GFP	pF	KpnI/BamHI / NotI	PCR of <i>tul4</i> promoter and 5'UTR from pKR89; PCR of <i>gfp</i> from IDT gBlock of super-folder GFP codon-optimized for LVS; three-way ligation	<i>tul4</i>	gagtatatgtgaatatttaaaaatag gagtatctatatgaaaaaataatt aag

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pKR146	pF- <i>pdpA</i> UTR-GFP	pF	KpnI/BamHI / NotI	PCR of <i>tul4</i> promoter and <i>pdpA</i> 5'UTR from pKR74; PCR of gfp from IDT gBlock of super-folder GFP codon-optimized for LVS; three-way ligation	<i>pdpA</i>	agttatgttctaattaagtagacaat gatagcagtaaaagat
pKR151	pF- <i>mraY</i> UTR-GFP	pKR145	PacI/NotI	PCR of <i>mraY</i> 5'UTR from LVS gDNA	<i>mraY</i>	ataaaaaatttgaaccaattatttag acgctaatttgactctattaaaaaa ataacatatctattataataactcaa ggtcattaaacattttaatatatgct gatttatctttt
pKR152	pF-FTL_0215 UTR-GFP	pKR145	PacI/NotI	PCR of FTL_0215 5'UTR from LVS gDNA	FTL_0215	ataattacaaaaaaaaataaaaatat ctctagcctaaaaaacattgttgaa aaatttttataaaaataactgattga aaccttaagattttattttattatgaa tatagttgactac
pKR156	pF- <i>mraY</i> UTR_mut1-GFP	pKR145	PacI/NotI	Overlap extension PCR of <i>mraY</i> 5'UTR from pKR151; modifications encoded on primers	<i>mraY</i>	ataaaaaatttgaaccaattatttag acgctaatttgactctattaaaCC CCGCCGatatctattataataactc caaggtcattaaacattttaatatat tgctgatttatctttt

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pKR157	pF- <i>mraY</i> UTR_mut2-GFP	pKR145	PacI/NotI	Overlap extension PCR of <i>mraY</i> 5'UTR from pKR151; modifications encoded on primers	<i>mraY</i>	ataaaaaattgaaccaattatttag acgctaatttgactctattataaaaa TATacatatctattataaactcca aggcattaaacattttaaatatg ctgatttatctttt
pKR160	pF- <i>iglA</i> UTR-GFP	pKR151	KpnI/NotI	PCR of <i>iglA</i> 5'UTR from LVS gDNA	<i>iglA</i>	aagggtgtgtgaaaaaaaggaca ataagatggcaaaaaataaaatc
pKR161	pF-FTL_0222UTR-GFP	pKR151	PacI/NotI	PCR of FTL_0222 5'UTR from LVS gDNA	FTL_0222	aaaaataaaaaattgtaatttagtc agaccattaagtagaattttgagta atcataatgtagatttaaattacaca gaatattaaatttttaaatccaatgctc agctcaagtctca
pKR162	pF-FTL_0881 UTR-GFP	pKR151	PacI/NotI	PCR of FTL_0881 5'UTR from LVS gDNA	FTL_0881	aaaatttttactggataaaaaagttt catgcagatgttttatttactatttag attttaacaaacataaaacaaataa tagtaaattaaggagaaaaaatg aaaaagataattaca
pKR163	pF-FTL_1093 UTR-GFP	pKR151	PacI/NotI	PCR of FTL_1093 5'UTR from LVS gDNA	FTL_1093	cctttcaatttagactagatattgtag attagaatatacttttctaaagtttat atcataattattaacaattatttaaca aattaataaggtaagtagatgctaa aaactaagagc

[illegible]

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pKL111	pEX Δ <i>hfq</i>	pEX	BamHI/KpnI / NotI	PCR of regions flanking <i>hfq</i> from LVS gDNA; three-way ligation	-	-
VSV-G tagging integration vector						
pKR158	pEX- <i>hfq</i> -V	pKL02	KpnI/NotI	PCR of 3' end of <i>hfq</i> gene from LVS gDNA	-	-