Figure S1

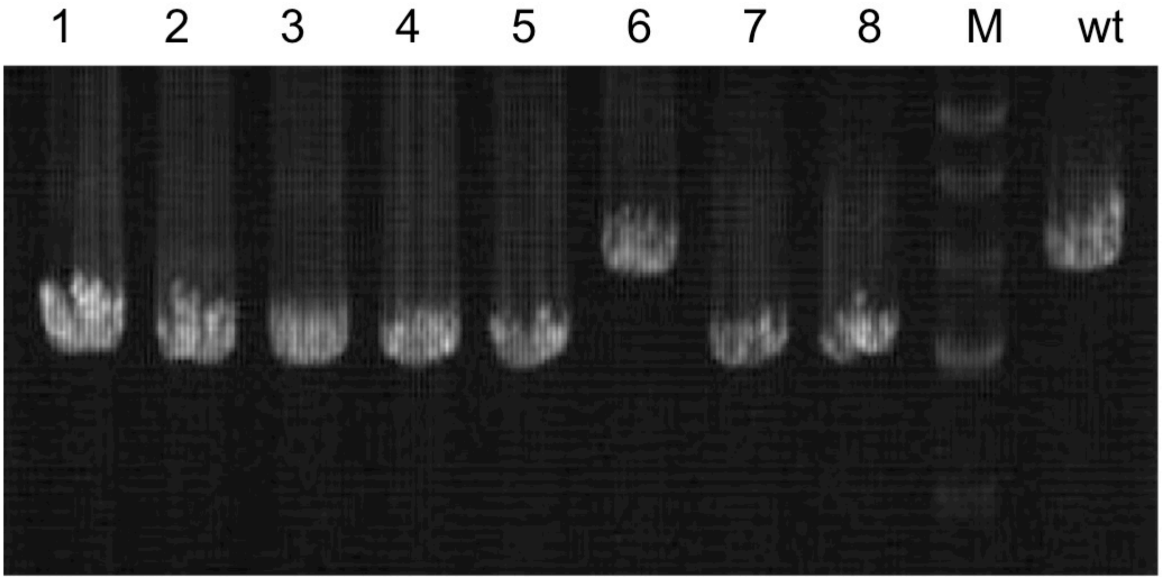

Figure S1. Screening of putative *trpAB* marker replacement mutants. A 3.9kb product is produced from the wild type, while a 3.1kb band is produced by the targeted marker replacement.

Figure S2

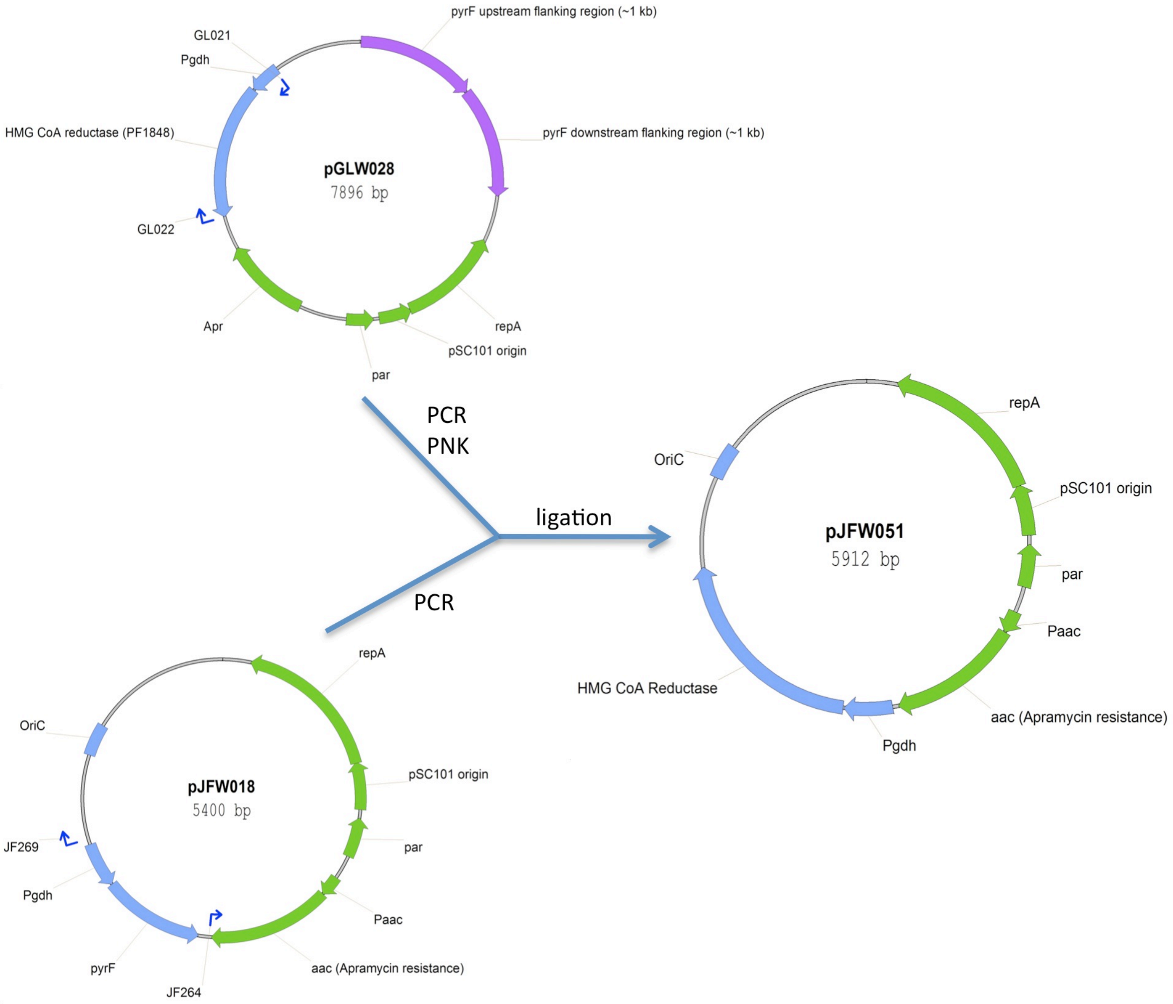

Figure S2. Construction of pJFW051. A 4.4kb fragment was amplified by PCR from pJFW018 using primers JF264 and JF269. The P_{gdh}-*hmg* cassette (22) was amplified from pGLW28 (21) using primers GL021 and GL022, treated with T4 polynucleotide kinase and ligated into the 4.4kb fragment to produce pJFW051.

Table S1. Primer Sequences

Primer	Sequence (5' to 3')
pyrF500bpF	AAAACAGATATCCGAAATACTCGA

pyrF500bpR	GGTTATCTCCCAATCTTATCCCT
pyrF250bpF	ACGAGGCAATAAAGTTCGACGCAA
pyrF250bpR	TAAGATCTTCCTTATCAGAGAGCT
pyrF150bpF	GAGATTGTCAAGAGACTCTATGAT
pyrF150bpR	TCTGTGGTCTTATCGAACTCCGCA
pyrF100bpF	TACTTGGGCAGATAAAATTGGAAG
pyrF100bpR	AGCATCTTGCTTGCAATTTCCTCT
pyrF50bpF	AGTCGTCTTAAAGGGAGACCAACT
pyrF50bpR	ATCTCTTTAACATCCTTCTTGCTT
pyrF40bpF	AGGGAGACCAACTCCCCAGGGAAATATT
pyrF40bpR	TTGATTATCTCTTTAACATCCTTCTTGCTT
pyrF30bpF	ACTCCCCAGGGAAATATTGGAGGT
pyrF30bpR	CTTTAACATCCTTCTTGCTTAGGG
pyrF20bpF	GAAATATGGAGGTGGCTGAATGATTGTAC
pyrF20bpR	CTTCTTGCTTAGGGGGTGCTTTATCTTGAG
pyrF10bpF	AGGTGGCTGAATGATTGTACTAGCGTTGGA
pyrF10bpR	AGGGGGTGCTTTATCTTGAGCTCCATTCTT
pyrF0bpF	ATGATTGTACTAGCGTTGGACGTGTATGAG
pyrF0bpR	TTATCTTGAGCTCCATTCTTTCACCTCCTC
GL021	GATTGAAAATGGAGTGAGCTGAG
GL022	TCATCTCCCAAGCATTTTATGAG
GL055	AGAGAGAGGCATGCCACCTACCTCCTATATTGTTCCATG
GL058	GAGAGAGGGCGCGCCGTCAAGAGGATGATTAGGTAGAGC
GL158	TCAAATGCTCATCATTTAGTTTTATG
JF264	CTCCAACGTCATCTCGTTCTC
JF269	TCCATTGGAAATTGTGCTCCTAG
JF307	AATGAGCATGCGTTATAAACACATTCTC
JF311	AAGCTCTAGAAAAGATATTGGAGGTTCC
JF357	TTAATATGCCCAGGCCTACTCCTTTGCCGTCATCACCCATATGATCGTGAG
JF358	AGGAGTAGGCCTGGGCATATTAACGTGCTGACTGATAGAGGATTAGCTAA T TGAACTC
JF355.1	AGGAGTAGGCCTGGGCATATTAACGTGCTGACTGATTGAAAATGGAGTGA TGAG
JF356.1	TTAATATGCCCAGGCCTACTCCTTTGCCGTGATTTTATCTTGAGCTCCATTC TCAC
JF322	ACTGCCAGCATGCTCGTAG
JF326	AGATGCTAGCGAAGGGGATGAAGTTG
JF359	TTCGTGTTATGATGCCCACTAAGCGTCTGCTCGACCTTCAGATTTCAAAAC TCATAG
JF360	TTAGTGGGCATCATAACACGAAAGAGAGTGATTAGAGCCTGTCGTAGACC
JF355.2	ACGCTTAGTGGGCATCATAACACGAAAGAGAGTGATTGAAAATGGAGTGA TGAG
JF356.2	TGTTATGATGCCCACTAAGCGTCTGCTCGGATTTTATCTTGAGCTCCATTC TCACC
JF392	AAGAGAAGTCGGCAATTCAC

JF393	ACGAAACCGGGTCTCGGCGTAACACGCTCACTTCACCAAACCACATTTTTG C
JF394	TGTTACGCCGAGACCCGGTTTCGTCTCTCATTTAGGGATCTAAAATTTTGTA AAAC
JF395	TAGGGAGTATAAGAGAAGAGC
JF355.3	TGTTACGCCGAGACCCGGTTTCGTCTCTCATGATTGAAAATGGAGTGAGCT AG
JF356.3	AAACCGGGTCTCGGCGTAACACGCTCACTTGATTTTATCTTGAGCTCCATT TTCACC
WN008	CCAAACCACATTTCAGTTCACCTCCGCCTT
WN009	GTGAACTGAAATGTGGTTTGGTGAGTTTGG
WN010	CTAAAAAAGATTTTAGATCCCTAAAAGTTCCTCTA

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