

Table S2. Primers used in this study

Primers	Sequence (5'–3')	Application
<i>p-orf004-F</i>	GCGAATTCGAGCTCGGTACatgtacgacaaggctcaag	For constructing gene expression plasmid
<i>p-orf004-R</i>	AGCTTGCATGCCTGCAatgttttcattctcttctccatt	
<i>p-orf003004-F</i>	AAACGATGGCGATTGCGatgtacgacaaggctcaagt	For constructing gene deletion mutant
<i>p-orf003004-R</i>	CGACGGCCAGTGCCAttagaccctcccgaac	
<i>pME6032-orf004-F</i>	CAAgattcatgtacgacaaggctcaa	
<i>pME6032-orf004-R</i>	CCGctcgagttagtttcattctcttc	
<i>pUCP24- orf004-F</i>	ACGAATTCGAGCTCGGTACatgtacgacaaggctca	
<i>pUCP24- orf004-R</i>	TGCCTGCAGGTGCACTtagttttcattctcttctcc	
<i>004-G1F</i>	TAGTacttcatgagtgtagacac	
<i>004-G1R</i>	AAACgtgtcacactcatgaagtgt	
<i>Δ004-LA-F</i>	GGTCTGACAGCTCGAGagtctaatagagaactgcttc	
<i>Δ004-LA-R</i>	agtttcatgaagccgtttccgc	
<i>Δ004-RA-F</i>	aacggcttcatgaaaactaaagagatcgatgtc	
<i>Δ004-RA-R</i>	TTTTTTTGGCGCGCCattgtctcagacattagaccc	
<i>Δ003004-LA-F</i>	GGTCTGACAGCTCGAGagtctaatagagaactgctt	
<i>Δ003004-LA-R</i>	ctcccgagaagccgtttccgctc	
<i>Δ003004-RA-F</i>	acggcttctcgggaggggtctaattgtc	
<i>Δ003004-RA-R</i>	TTTTTTTGGCGCGCctccctagtgccgtagttc	
<i>Δ003-RO</i>	gcgatggtgtatagattcacc	For constructing BTH plasmid
<i>Δ003-LO</i>	agaccctgaagagaacatc	
<i>Δ004-RO</i>	gctttgatgcacccgatag	
<i>Δ004-LO</i>	tccttacgcccgaataag	
<i>pBT-004-F</i>	ATAgcgccgcAATGTACGACAAGGCCTCAA	For constructing BATCH plasmid
<i>pBT-004-R</i>	CACgaattcTTAGTTTTTATTCTCTTCCTCCAT	
<i>pTRG-exsA-F</i>	ATAgcgccgcAATGCAAGGAGCCAAATAT	
<i>pTRG-exsA-R</i>	CACgaattcTCAGTTATTTTTAGCCCGGC	
<i>pUT18C-004-F</i>	TGGAACGCCACTGCAatgtacgacaaggctcaag	For constructing BATCH plasmid
<i>pUT18C-004-R</i>	AGTGCACCATATTACTTAGTTATATtagttttcattctcttctccattt	
<i>pKT25-003-F</i>	ACGCGGCGGGCTGCAatgaaaactaaagagatcgatgt	
<i>pKT25-003-R</i>	AGTGAATTCTTACTTACTTAGGTACtagaccctcccgaacgtt	
<i>pKT25-050-F</i>	ACGCGGCGGGCTGCAatgaagctgtgccctcgc	
<i>pKT25-050-R</i>	AGTGAATTCTTACTTACTTAGGTACctaaactacaatctcatatccttcaataacc	
<i>pKT25-lon-F</i>	ACGCGGCGGGCTGCAatgaaaacactcgtcgaatt	

pKT25- <i>lon</i> -R	AGTGAATTCTTACTTACTTAGGTACcctaatgcgtgctaattcgc	qRT-PCR
16s-F	CAAAAGCTACTGAGCTAGAGTACG	
16s-R	TAAGATCTCAAGGATCCCAACGGCT	
<i>exsA</i> -qpcr-F	GGAGAATCCTCTATGCCCATCA	
<i>exsA</i> -qpcr-R	CTCTGGGTGAAATAGGACTGACTG	
<i>exsC</i> -qpcr-F	TGGCACCGTTTCGATCTGCA	
<i>exsC</i> -qpcr-R	GCCAAGGTCGCCTCGAAGCATT	
<i>exoS</i> -qpcr-F	AGGAGCTGGATGCGGGACAAA	
<i>exoS</i> -qpcr-R	CCACGGGTGCCACGGAAAGT	
<i>exoT</i> -qpcr-F	CGCGAAATCGCCGTCCAA	
<i>exoT</i> -qpcr-R	AGCCCGAAGTGCTCCACCAG	
<i>exoY</i> -qpcr-F	GCATGGCAGTGGTGGTCTCG	
<i>exoY</i> -qpcr-R	CCATAGAATCCGTCCTCGCTCA	
<i>hemH</i> -qpcr-F	TGGAAAGCGTGCGTCCGTACCTG	
<i>hemH</i> -qpcr-R	GGGCTGACGTTGCGGCTGTTCT	
<i>hfp</i> -qpcr-F	CACGCAAGCAGGCGGAGAGC	
<i>hfp</i> -qpcr-R	TGGCAGCGGAAAGCGAATAG	
<i>pscF</i> -qpcr-F	GAATACCCTCGATACCGTGG	
<i>pscF</i> -qpcr-R	GTTGATGTTGTAGATGACCG	
<i>pcrV</i> -qpcr-F	CCGAAGCAGAGCGGGGAA	
<i>pcrV</i> -qpcr-R	CCGAGTTGTAGCGGGAGC	
<i>orf004</i> -qpcr-F	AGTGCTACTGTGGGTTGG	
<i>orf004</i> -qpcr-R	TGGCCTCTTTGAGTTCTT	
<i>orf053</i> -qpcr-F	CGGTTCTGTCTGGTGGTCT	
<i>orf053</i> -qpcr-R	TCAACAGGCTCGTCGTCT	
pEGX-6p-1- <i>orf004</i> -F	CTGTTCCAGGGGCCCatgtacgacaaggctcaa	For constructing protein expression plasmid
pEGX-6p-1- <i>orf004</i> -R	CGTCAGTCAGTCACGATGCttagttttcattctcttctccatttct	
<i>orf004</i> -DTB-F	cgggtgtactaccgagactta	
<i>orf004</i> -DTB-R	cttgcttggttaggttgct	
<i>orf004</i> ^{V52K} -F	acctacgacttccgaaggaAAgacttccatttcgtca	
<i>orf004</i> ^{V52K} -R	tgacgaaatggaagtcTTtccttcggaagtcgtaggt	
<i>orf004</i> ^{A64K} -F	gagaagaaagtgaccgAAacacacttcatgagtgta	
<i>orf004</i> ^{A64K} -R	tcacactcatgaagtgtgtaTTcggtcactttctctc	
<i>orf004</i> ^{N79A} -F	gtcctactacagagctaGCTggcacctacacgcttca	
<i>orf004</i> ^{N79A} -R	tgaagcgtgtaggtgccGCTagctctgtagtaggac	
<i>orf004</i> ^{E97AE99A} -F	ggaagCgaatGCAaactaaagagatcgatgct	
<i>orf004</i> ^{E97AE99A} -R	gttTGCattcGcttctctcatttctgcaa	
<i>excC</i> promoter-F	GCCGTCTCCGCGCGGGAGGA	For constructing promoter- <i>lux</i> plasmid
<i>excC</i> promoter-R	GGGGGCGCCTCCTAAAGCTC	