

Table S1. Sequences of oligonucleotide primers used in this study

Primers	Sequences (5' to 3')
<i>hfq</i> mutation F	AATGGCTAAGGGGCAATCATTACAAGACCCGTTCTTAAACGCA TTGCGTTCG GTGTAGGCTGGAGCTGCTTC
<i>hfq</i> mutation R	GGGGGTCCGGGACACAAAGACTCCCCGTCGTGGAGGAACGGT CACGCTGGTCATATGAATATCCTCCTTA
<i>gcvB</i> mutation F	ATTATAAATTGTCCGTTGAGGAACTGCCAGCAAATACCTATAG TTGCGCCGTGTAGGCTGGAGCTGCTTC
<i>gcvB</i> mutation R	AAGCACCGCAGTTTGCGGTGCTGTAAAAATCAATATGGACAG ACAGGGTACATATGAATATCCTCCTTA
<i>glmZ</i> mutation F	TGAGGTAGAAATTTTCTGCCAGAGTTACCGATATGGCACGTCA TGTGCAGTGTGTAGGCTGGAGCTGCTTC
<i>glmZ</i> mutation R	TGTGTTCACAATCCTATCGCAGATAGCCAGGGCTTATGCTGCT ATAAACCGCATATGAATATCCTCCTTA
<i>micA</i> mutation F	TTTATTTTTGATGCGATGAACTTTCTCGATCGCCAGACGTCTC AGTATATGTGTAGGCTGGAGCTGCTTC
<i>micA</i> mutation R	AGTGATACGCTTAGCTTCGAAGCCTTTTTACAAAGCAAAGCT AGCGCCAACATATGAATATCCTCCTTA
<i>omrA</i> mutation F	GTTGCGATTCCGCGGTAGCGGTTTAATGCGGTGCATTGCTACA GTTCAGATGTGTAGGCTGGAGCTGCTTC
<i>omrA</i> mutation R	ACTAACCGGGGTTAGAGAGTTAATTATGATAATTAAACACAAA TTAAGAGCCATATGAATATCCTCCTTA
<i>rprA</i> mutation F	AATGAGATGATTCCTAATGACTCCAAAAACACCTTTTCATACT ATGGTTACGTGTAGGCTGGAGCTGCTTC
<i>rprA</i> mutation R	GTCTGGCAGGCGGCTCTGAATGCCCGGGACGATCGGTTACCG ATCGTCCTCATATGAATATCCTCCTTA
<i>ryeA</i> mutation F	AGATAATACGTGACGGTAGAACTTTAAGGATCGTGACGTGGCC GGGAAAGGTGTAGGCTGGAGCTGCTTC
<i>ryeA</i> mutation R	TACCCTCAACGGGCGTGCCGAAACCTGCAGAGATAGCGGCC ATATGGCATCATATGAATATCCTCCTTA
<i>ryhA</i> mutation F	GACGCCGTTCAACATCACACATTTTAATGAATCTGGTAACATG TGATGAAGGATT GTGTAGGCTGGAGCTGCTTC
<i>ryhA</i> mutation R	AGTTTTACGGCAATGGGTAACAGACGCTGAAAAAAAAATGACC CCGACCGAACATATGAATATCCTCCTTA
<i>ryhB</i> mutation F	GGCGTAACACTGCCGCAATAAGGTGAGACAGGCTCACCGCCG CTACCTGAAGTGTAGGCTGGAGCTGCTTC
<i>ryhB</i> mutation R	CTGGAGCTGGGGGCGCTGTTAGCCAGGTTTAAGTGGACTGTAA GGGATAAACATATGAATATCCTCCTTA
<i>spf</i> mutation F	AAGATTGGCCGTATTTTGTGAGCTAAGTTAGATTAATGTGTC ATTTGCTGGTGTAGGCTGGAGCTGCTTC
<i>spf</i> mutation R	GCCGCACAAGCTTAAAACACGCCAGCGTTTATCAGACAGTGAC TGAGATGACATATGAATATCCTCCTTA
<i>sroB</i> mutation F	TTGATGAATAAATAAGTGGTGAATGATGTCGCTTTAAGCGACA ATCGACACGTGTAGGCTGGAGCTGCTTC
<i>sroB</i> mutation R	GAGGGTAACCTTCCCGGCCTGCTAAGCGGCGGCTAAAAAAAAA GGCCAATATCATATGAATATCCTCCTTA

RACE RNA linker	GACGAGCACGAGGACACUGACAUGGAGGAGGGAGUAGAAA
<i>ryhA</i> reverse primer for RACE	CAGGGAAATTGGTAACCTGT
<i>rprA</i> reverse primer for RACE	CAGCAATTCTTTAGTAACTC
<i>arcB</i> qRTPCR F	AAACGGGAATATCTGGATGC
<i>arcB</i> qRTPCR R	CTGGCAATCCCAGTATCCTT
<i>amsG</i> qRTPCR F	GCGACAGGTGGCTAAAGAAT
<i>amsG</i> qRTPCR R	TAAGCCATATCCGTGCCATA
<i>amsK</i> qRTPCR F	TCAACTGAAGACCGCCATT
<i>amsK</i> qRTPCR R	TCTGCTTCATCCAGATAGCG
EAM1647 qRTPCR F	ATTCCTGTCGCTCTTCTGGT
EAM1647 qRTPCR R	CAGTGTAATCGGGCATTG
<i>eop1</i> qRTPCR F	GCCTGTACGAATACGCCAA
<i>eop1</i> qRTPCR R	GCGGCAATAGCTTTCTATCC
<i>fliC</i> qRTPCR F	CACGTCTGGACGAAATTGAC
<i>fliC</i> qRTPCR R	GTTAGCACCCACCTGGATTT
<i>hrpK</i> qRTPCR F	TCAGATCGTCTCGGGTAAGA
<i>hrpK</i> qRTPCR R	AGCAGCGCATCACTGTAATC
<i>mtgA</i> qRTPCR F	TATCGCAGCAGACGGCTA
<i>mtgA</i> qRTPCR R	CAGACTCTATGCCAGGGTT
<i>ppsA</i> qRTPCR F	ACGATCCGCTGGAGTTCTAT
<i>ppsA</i> qRTPCR R	AGTCTGACAAGCGCACAATC
<i>recA</i> qRTPCR F	TGTGCTCTCAGCCAGATACC
<i>recA</i> qRTPCR R	GCAACGGAGTCAACAATGAT
<i>hfq</i> -pML123 F	GATGAGCTCCGGCTGGAAAGATGTTCACT
<i>hfq</i> -pML123 R	CGATCTAGAGCCCACTGCGTCAATATCA
<i>rprA</i> -pML123 F	GATGAGCTCCGAAATCATTAGCAAGCAGAA
<i>rprA</i> -pML123 R	CGATCTAGAGTGGTGCAAACCTGGCTTAG
<i>ryhA</i> -pML123 F	GATGAGCTCGGAGAGAAAAAGCGGTTCAA
<i>ryhA</i> -pML123 R	CGATCTAGAGTGGGACAACGTTTCAGGAAT

ryhA

3399347

+1



AGACGCCGUUCAACAUCACACAUUUUAAUGAAUCUGGUAACAUGUGAUGAAGGAUUUGCUAAGCUAGU
AACACGAUGUUUUUAGUUCUACCCAAUACCAAACCUUGUCUCCCGACGAUACCUAUCAGAACAGCACAGG
UUACCAAUUUCCCUGGUGUUGGCGCAGUCUUCGCGCACCCCGGCUUCGGUCGGGGUCAUUUUUUUUU

+204

3399550

rprA

1771835

+1



UCAUACUAUGGUUACAGGAUUUGAAAUCUUCCACUGAUUUUGAAUUAACAGACUUACCCCCCUGAGU
UAACUAAAGAAUUGCUGUGUGUAGUCUUUGCCCAUCCCUUGUGAUGGGCUUUUUUUU

+111

1771945

Figure S1. Nucleotide sequences of sRNAs *ryhA* (204 nucleotides) and *rprA* (111 nucleotides) from *E. amylovora* Ea1189. The transcriptional start sites of both *ryhA* and *rprA* were determined using 5' RACE assays and are annotated as +1. Horizontal arrows indicate inverted repeats of the Rho independent terminators.

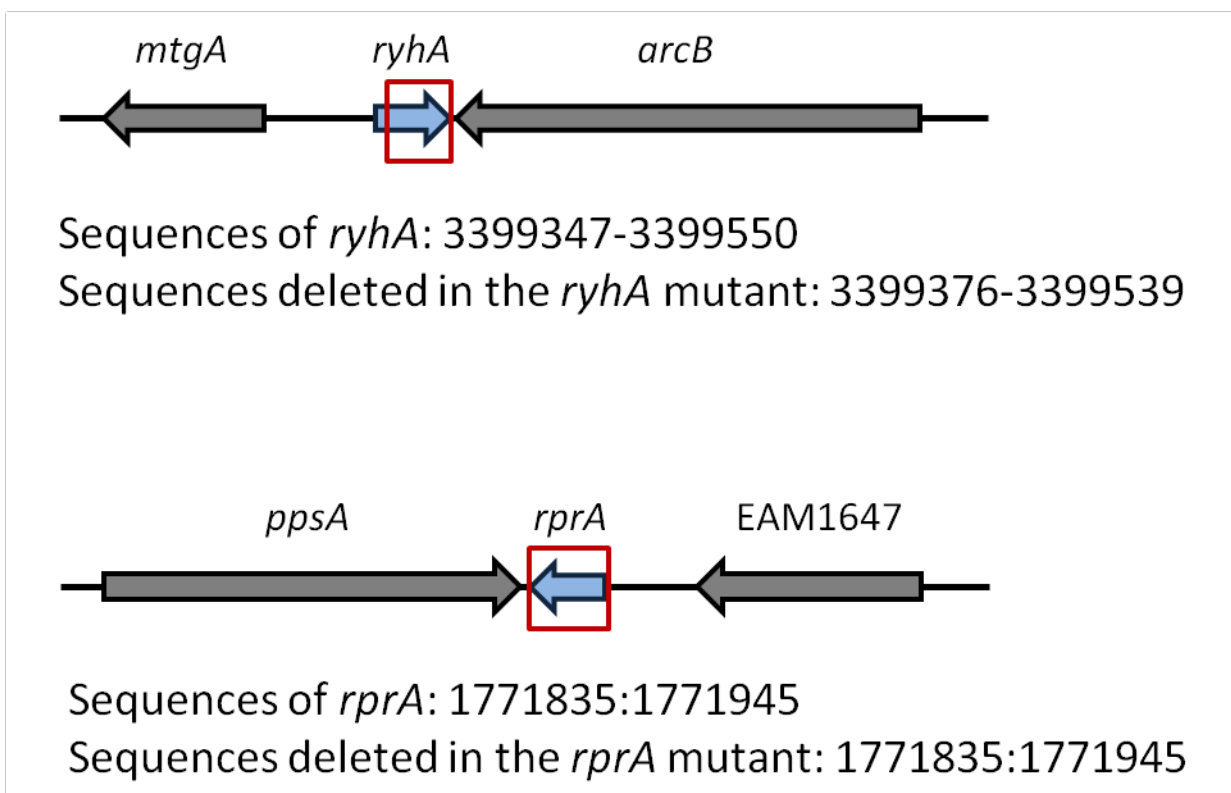


Figure S2. Illustration of the sequences deleted in $Ea1189\Delta ryhA$ and $Ea1189\Delta rprA$ and the genomic context of these sRNAs. The 5' end and 3' end of the $ryhA$ and $rprA$ genes were determined using a 5' RACE assay and the location of the Rho-independent terminator sequences, and annotated on the genome of *E. amylovora*. Red boxes indicate sequences deleted in the $\Delta ryhA$ and $\Delta rprA$ mutants. Specific sequences deleted in $\Delta ryhA$ and $\Delta rprA$ as well as the genome location of $ryhA$ and $rprA$ are also indicated.

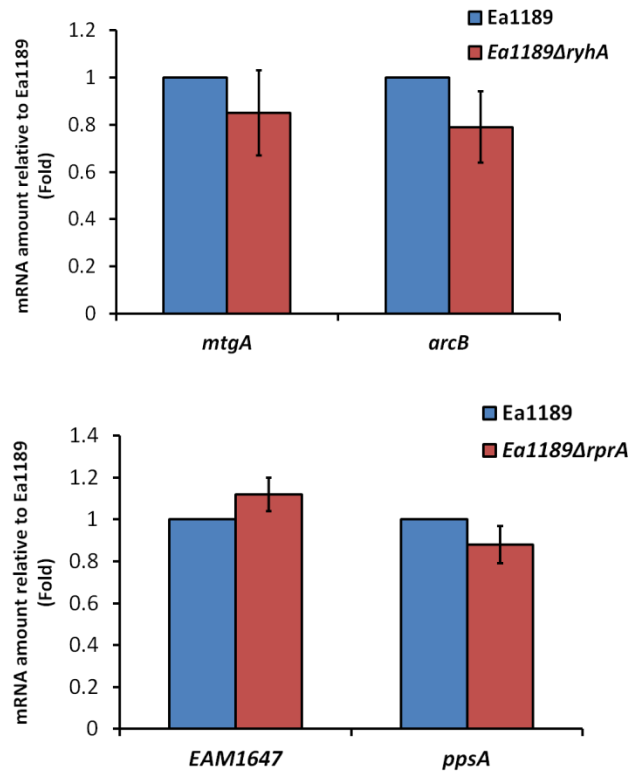


Figure S3. (A) Relative mRNA amount of *mtgA* and *arcB* in Ea1189 and Ea1189Δ*ryhA*. (B) Relative mRNA amount of *EAM1647* and *ppsA* in Ea1189 and Ea1189Δ*rprA*. mRNA amount was quantified by qRT-PCR. Experiments contained three replicates and were conducted twice. Data from one representative experiment are shown. No significant differences were observed between wild type and the sRNA mutants ($P > 0.05$).



Figure S4. Virulence of *E. amylovora* Ea1189, Ea1189Δ*hfq*, Ea1189Δ*rprA*, Ea1189Δ*ryhA*, Ea1189Δ*hfq*(pML*hfq*), Ea1189Δ*rprA*(pML*rprA*), and Ea1189Δ*ryhA*(pML*ryhA*) in immature pears, at 5 days post inoculation (DPI).