

**Table S1. Strains and plasmids used in this study for mutagenesis.**

Strains/Plasmids	Function	Source or Reference
<b>Strain</b>		
<b><i>Escherichia coli</i></b>		
DH5 $\alpha$	Tri-parental conjugation donor strain	Invitrogen
HB101 pRK2013	Tri-parental conjugation helper strain	Figurski and Helinski (1979) [14]
<i>E. coli</i> TOP10	Competent cells for bulk preparation of pJET1.2- <i>Apr</i> <sup>R</sup>	Invitrogen
<i>E. coli</i> XL1-Blue	Competent cells for bulk preparation of pJET1.2- <i>Apr</i> <sup>R</sup>	Invitrogen
<b><i>Saccharomyces cerevisiae</i></b>		
YPH500 (ATCC 76626)	Homologous recombination of allelic exchange vector	Pahirulzaman <i>et al.</i> (2012) [15]
<b><i>Pseudomonas protegens</i></b>		
CHA0 (DSM 19095 <sup>T</sup> )	Wild-type for mutagenesis	German Collection of Microorganisms and Cell Cultures (DSMZ)
Pf-5 (ATCC BAA-477)	Wild-type for mutagenesis	Howell and Stipanovic.(1979) [16]
CHA0 $\Delta$ <i>pgnD</i>	Mutant with clean deletion of fatty acyl-AMP ligase, <i>pgnD</i>	This study
Pf-5 $\Delta$ <i>pgnD</i>	Mutant with clean deletion of fatty acyl-AMP ligase, <i>pgnD</i>	This study
Pf-5 $\Delta$ <i>pgnE</i> - <i>Kan</i> <sup>R</sup>	<i>pgnE</i> gene replacement mutant with <i>Kan</i> <sup>R</sup> cassette	This study
Pf-5 $\Delta$ <i>pgnF</i> - <i>Kan</i> <sup>R</sup>	<i>pgnF</i> gene replacement mutant with <i>Kan</i> <sup>R</sup> cassette	This study
Pf-5 $\Delta$ <i>pgnH</i> - <i>Kan</i> <sup>R</sup>	<i>pgnH</i> gene replacement mutant with <i>Kan</i> <sup>R</sup> cassette	This study
<b><i>T. caryophylli</i></b>		
Wild type (DSM50341)	Wild-type for mutagenesis	German Collection of Microorganisms and Cell Cultures (DSMZ)
$\Delta$ <i>cayB</i> - <i>Apr</i> <sup>R</sup>	<i>cayB</i> gene replacement mutant with <i>Apr</i> <sup>R</sup> cassette	This study
$\Delta$ <i>cayC</i> - <i>Apr</i> <sup>R</sup>	<i>cayC</i> gene replacement mutant with <i>Apr</i> <sup>R</sup> cassette	This study
$\Delta$ <i>cayE</i> - <i>Apr</i> <sup>R</sup>	<i>cayE</i> gene replacement mutant with <i>Apr</i> <sup>R</sup> cassette	This study
$\Delta$ <i>cayF</i> - <i>Apr</i> <sup>R</sup>	<i>cayF</i> gene replacement mutant with <i>Apr</i> <sup>R</sup> cassette	This study
<b>Plasmids</b>		
pMQ30	Allelic exchange vector	Shanks <i>et al.</i> (2006) [17]
pMQ30_F1_F2	Recombinant allelic exchange vector with <i>pgnD</i> flanking homology arms	This study
pGEM-Kan	Source of kanamycin resistance gene ( <i>Kan</i> <sup>R</sup> )	Ishida, Lincke and Hertweck (2012) [18]
PIJ773	Source of apramycin resistance gene ( <i>Apr</i> <sup>R</sup> )	Gust <i>et al.</i> (2003) [19]
pJET1.2	Introduce <i>Apr</i> <sup>R</sup> to target organism	Thermo Fisher Scientific
pGL42a	Introduce <i>Kan</i> <sup>R</sup> to target organism	Lackner, Moebius and Hertweck (2011) [20]