

S2 Table. Plasmids used in this study

Plasmid	Relevant characteristic	Source
pAAS1544	Cb ^R . Derived from pPR54 [1] encoding <i>A. vinelandii</i> NifL (147-519) and NifA-E356K.	Adriano Stefanello
pPR34	Cb ^R . <i>A. vinelandii nifLA</i> translated from the natural ribosome binding site of <i>nifL</i> in pT7-7	[1]
pPMA	Cb ^R . Derived from pPR34, but encoding <i>nifA-E356K</i>	[2]
pRT22	Cm ^R . <i>pnifH::lacZ</i> in pACYC184	[3]
pBlueScript SK II +	Cb ^R . Cloning vector	[4]
pUC19	Cb ^R . Cloning vector	[5]
pK18mobsacB Km	Km ^R , Mob. Suicide vector for gene replacement. <i>sacB</i> gene for counter selection	[6]
pALMAR3	Tc ^R . Source of tetracycline resistance gene (<i>tetA</i>)	[7]
pUC18T-mini-Tn7T-Tp	Tp ^R . Source of the trimethoprim resistance gene (<i>tmp</i>)	[8]
pMB1724	Cb ^R . 1893 bp PCR fragment corresponding to <i>A. vinelandii nifHD</i> region cloned into BamHI/HindIII sites of pBlueScript II +	This study
pMB1725	Cb ^R , Tc ^R . <i>tetA</i> gene amplified by PCR from pALMAR3 inserted into BglIII and EcoRI sites of pMB1724	This study
pMB1804	Cb ^R . Derived from pPR34 encoding <i>P. stutzeri</i> A1501 <i>nifL-nifA</i>	This study
pMB1805	Cb ^R . Derived from pPR34 encoding <i>P. stutzeri</i> A1501 <i>nifL-nifA-E356K</i>	This study
pMB1806	Cb ^R . Derived from pPR34 encoding <i>A. olearius</i> DQS-4 <i>nifL-nifA</i>	This study
pMB1807	Cb ^R . Derived from pPR34 encoding <i>A. olearius</i> DQS-4 <i>nifL-nifA-E351K</i>	This study
pMB1816	Cb ^R , Tp ^R . <i>A. vinelandii nifH::lacZ</i> fusion flanked by homology regions for integration into <i>algU</i> genome locus	This study
pMB1840	Km ^R , Tp ^R . <i>A. vinelandii glnE</i> deletion. Fragments upstream (906 bp) and downstream (752 bp) of <i>glnE</i> were fused to the <i>tmp</i> gene, and inserted into pk18mobsacBKm cut with SmaI	This study
pMB2005	Km ^R . The <i>mf-nifLA</i> intergenic region (444 bp) from <i>A. vinelandii</i> was fused downstream to a fragment of the <i>P. stutzeri mfnAB</i> genes (1160 bp) and upstream to a fragment of the <i>P. stutzeri nifL</i> gene (1638 bp) and inserted into pk18mobsacBKm cut with SmaI	This study
pMB2006	Km ^R . Ps- <i>nifLAE356K</i> fragment (2364 bp) from pMB1805 was fused to an 847 bp fragment downstream Ps- <i>nifA</i> and inserted into pk18mobsacBKm cut with SmaI. Construct to recover <i>tetA</i> from Ps_EK ^C - <i>tetA</i> to generate Ps_EK ^C	This study
pMB2007	Km ^R , Tc ^R . The plasmid pMB2006 was linearized by PCR and fused to a fragment encoding the <i>tetA</i> gene (1349 bp). Construct to generate Ps_EK ^C - <i>tetA</i>	This study

Abbreviations: Cb: carbenicillin, Cm: chloramphenicol, Km: kanamycin, Tc: tetracycline, Tp: trimethoprim, ^R: resistance.

S2 Table References

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