

**Table S2.** Bacterial strains and plasmids used in this study

	Relevant characteristics	Source or reference
<b>Strains</b>		
<i>M. extorquens</i>		
AM1	Wild type	Lab strain
$\Delta phyR::kanR$	Deletion mutant of the <i>phyR</i> gene	(2)
<i>AecfG1</i>	Deletion mutant of the <i>ecfG1</i> gene using the vector pCM433-ecfG1	This study
<i>E. coli</i>		
DH5 $\alpha$	<i>supE44 <math>\Delta lacU169</math> (<math>\phi 80lacZDM15</math>) <i>hsdR17 recA1 endA1 gyrA96 thi-1 relA1</i></i>	Invitrogen
BL21(DE3)	<i>ompT hsdS<sub>B</sub>(<math>\tau_B</math> m<sub>B</sub>) gal dcm</i> (DE3)	Invitrogen
<b>Plasmids</b>		
pCM62	Tc <sup>R</sup> ; <i>M. extorquens/E. coli</i> shuttle vector (P <sub>lac</sub> )	(1)
pCM62-phyR	Tc <sup>R</sup> ; pCM62 derivative containing <i>phyR</i>	This study
pCM62-phyRD190A	Tc <sup>R</sup> ; pCM62 derivative containing <i>phyR</i> D190A	This study
pCM80	Tc <sup>R</sup> ; <i>M. extorquens/E. coli</i> shuttle vector for expression of genes under the control of the <i>mxoF</i> promoter (P <sub>lac</sub> -P <sub>mxoF</sub> )	(1)
pCM80-phyR	Tc <sup>R</sup> ; pCM80 derivative containing <i>phyR</i>	This study
pCM80-phyRNterm	Tc <sup>R</sup> ; pCM80 derivative containing the ECF sigma factor like domain-encoding part of <i>phyR</i>	This study
pCM80-nepR	Tc <sup>R</sup> ; pCM80 derivative containing <i>nepR</i>	This study
pCM80-nepR-his	Tc <sup>R</sup> ; pCM80 derivative for production of NepR with a C-terminal hexahistidine tag	This study
pCM433	Ap <sup>R</sup> , Cm <sup>R</sup> , Tc <sup>R</sup> ; broad-host-range <i>sacB</i> -based allelic exchange vector	
pCM433-ecfG1	Ap <sup>R</sup> , Cm <sup>R</sup> , Tc <sup>R</sup> ; pCM433 derivative used for the deletion of <i>ecfG1</i>	This study
pET16b	Amp <sup>R</sup> ; vector for production of recombinant protein in <i>E. coli</i> adding an N-terminal decahistidine tag	Novagen
pET16b-nepR	Amp <sup>R</sup> ; vector for production of NepR	This study
pET16b-ecfG1 $\Delta$ 1-64	Amp <sup>R</sup> ; vector for production of $\sigma^{EcfG1} \Delta 1-64$	This study
pET24b	Kan <sup>R</sup> ; vector for production of recombinant protein in <i>E. coli</i> adding a C-terminal hexahistidine tag	Novagen
pET24b-phyR	Kan <sup>R</sup> ; pET24b derivative for production of PhyR with a C-terminal hexahistidine tag	This study
pET101/D-TOPO	Amp <sup>R</sup> ; linearized, topoisomerase I-activated vector for production of recombinant protein with a C-terminal hexahistidine tag in <i>E. coli</i>	Invitrogen
pET101-phyRD190A	Amp <sup>R</sup> ; vector for production of the PhyR D190A mutant	This study
pET101-phyRNterm	Amp <sup>R</sup> ; vector for production of the N-terminal ECF domain of PhyR	This study