

**Table S1:** Bacterial strains, plasmids and oligonucleotides used in this work

| Strain or plasmid                 | Description   | Reference     |
|-----------------------------------|---|---------------|
| <u>Strains</u>                    |   |               |
| <i>Escherichia coli</i>           |   |               |
| cc118λ-pir                        | Δ(ara-leu) araD ΔlacX74 galE galK phoA20 thi1 rpsE rpoB argE(Am) recA1 λ pir; Strep <sup>R</sup>  | [1]           |
| Top10                             | ΔlacX74 ara Δ139Δ(ara-leu)  | Invitrogen    |
| <i>Paraburkholderia phymatum</i>  |   |               |
| STM815                            | Wild type   | [2]           |
| ΔnifV_F                           | ΔnifV of STM815; Cm <sup>R</sup>  | This study    |
| ΔnifV_R                           | ΔnifV of STM815; Cm <sup>R</sup>  | This study    |
| ΔnifV_F-comp                      | STM815-ΔnifV_F mutant harboring pBBR1MCS-5-nifV; Km <sup>R</sup>  | This study    |
| WT-pPROBE                         | STM815 harboring pPROBE-NT empty vector; Km <sup>R</sup>  | [3]           |
| WT-pPROBE-nifV                    | STM815 harboring pPROBE-NT with the promoter of nifV  | This study    |
| WT-pPROBE-nifH                    | STM815 harboring pPROBE-NT with the promoter of nifH  | This study    |
| <i>Klebsiella pneumoniae</i> 5022 |   |               |
|                                   | K. sp. M5aI strain, hisD2 genotype  | [4]           |
| <u>Plasmids</u>                   |   |               |
| pBBR1MCS-2                        | Broad host-range cloning vector; Km <sup>R</sup>  | [5]           |
| pEX18Tc                           | Suicide plasmid; Tc <sup>R</sup>  | [6]           |
| pPROBE-NT                         | Broad-host-range promoter-probe vector; Km <sup>R</sup>   | [7]           |
| pRK2013                           | Helper plasmid; Km <sup>R</sup>   | [8]           |
| pSHAFT2                           | Suicide plasmid; Cm <sup>R</sup>  | [9]           |
| pBBR1MCS-2-nifV                   | pBBR1MCS2 containing nifV (Bphy_7741) for complementation; Km <sup>R</sup>  | This study    |
| pEX18Tc- nifV_F                   | pEX18Tc-containing a 485 bp upstream fragment and a 479 bp downstream fragment of nifV for mutagenesis; Tc cassette in forward direction, Tc <sup>R</sup> | This study    |
| pEX18Tc- nifV_R                   | pEX18Tc-containing a 485 bp upstream fragment and a 479 bp downstream fragment of nifV for mutagenesis; Tc cassette in reverse direction, Tc <sup>R</sup> | This study    |
| pPROBE- nifV                      | pPROBE-NT containing the nifV promoter (431 bp); GFP expressing promoter reporter, Km <sup>R</sup>  | This study    |
| <u>Oligonucleotides</u>           |   |               |
|                                   | <u>Sequence<sup>1</sup></u>   | <u>Source</u> |
| Bphy7741_up_F_EcoRI               | GCGCgaattcGATGCCGATAACAGGCAGTTG   | This study    |
| Bphy7741_up_R_NdeI                | CGCGcatatgCGGTTTGAGCATGTCTACGG  | This study    |
| Bphy7741_down_F_NdeI              | CGCGcatatgGAGGCCTCATGAGTGTGCT   | This study    |
| Bphy7741_down_R_EcoRI             | GCGCgaattcGGTGTGTTGACTGGGTGAA   | This study    |
| Bphy7741_veri                     | TCCAGCGAGAACAGATCGTA  | This study    |
| Bphy7742_veri                     | TGCGATTGCAGTAGTTGCAC  | This study    |
| Bphy7741_comp_F_XbaI              | GCGCtctagaGATCAGGTTCTCGGGTTG  | This study    |
| Bphy7741_comp_R_HindIII           | GCGCaagctTCATGACGCCCTCCACTCG  | This study    |
| Bphy7741_prom_EcoRI_F             | GCGCgaattccGTCTACGGCCTATTGAATAGT  | This study    |
| Bphy7741_prom_SalI_R              | GCGCgtcgacGGATATCTCCTCGCAACCGAC   | This study    |

|                 |                                  |            |
|-----------------|----------------------------------|------------|
| catA2_F_NdeI    | GCGCcatatgTTGACAATTAAGCCGTATATGG | This study |
| catA2_R_NdeI    | GCGCcatatgCCGGATACGGTGGCTTAAAT   | This study |
| Bphy7808_nifH_F | GGCGTGGACTATGTGTCGA              | [10]       |
| Bphy7808_nifH_R | GATGCCCTCGAGATGTTGT              | [10]       |
| Koxy_nifV_F     | ATCCATCTTGCATACCCCT              | This study |
| Koxy_nifV_R     | GTGGTAAAAGGGTCGAGCAG             | This study |

<sup>1</sup>restriction sites are in lower letters.

## References

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