**Supplemental Table S3. A list of primers used in this study.**

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| **Primer name** | **Sequence (5’-3’)** | **Description**  |
| VprHNS1\_UP\_F\_SacI | CAGCGAGCTCAAGACACTGGACACGGTAG | Used to amplify 1 kb upstream of *hns1* to construct pDM4:*hns1* |
| VprHNS1\_UP\_R\_BamH | CAACGGATCCGACCATTCCTATGAATTTAATAAAGTC |
| VprHNS1\_DN\_F\_BamHI | CACCGGATCCTCGTAAGATTGGTTTAAAAAAGG | Used to amplify 1 kb downstream of *hns1* to construct pDM4:*hns1* |
| VprHNS1\_DN\_R\_SalI | CAACGTCGACCTATCGTTACCTGTGCAAC |
| VprTssL3\_UP\_F\_SpeI | CACCACTAGTTGAAGACAGCCGTTTGCG | Used to amplify 1 kb upstream of *tssL3* to construct pDM4:*tssL3* |
| VprTssL3\_UP\_R\_HindIII | CAACAAGCTTAACTACCTACCTGATCAC |
| VprTssl3\_DN\_F\_HindIII | CAGGAAGCTTTATGATCAAAAAAATTCTTG | Used to amplify 1 kb downstream of *tssL3* to construct pDM4:*tssL3* |
| VprTssL3\_DN\_R\_SphI | CAACGCATGCCCGGTTTTCACGCCCGATG |
| VPR\_ Tie1 \_SacI\_UP\_F | CAAAGAGCTCGCGCAGACTTACGTTAAG | Used to amplify 1 kb upstream of nucleotide 455 in *tie1* to construct pDM4:*tie1* |
| VPR\_ Tie1 \_XbaI\_Up\_R | CACCTCTAGATTTTGTAGAATCGTTCGCCCTGG |
| VPR\_ Tie1 \_XbaI\_DN\_F | CACCTCTAGATGAGCTGGGCATCAAGGCTGG | Used to amplify 1 kb downstream of nucleotide 584 in *tie1* to construct pDM4:*tie1* |
| VPR\_Tie1 \_SalI\_DN\_R | CAAAGTCGACTTTGCAAATTTTGCAGCAAACG |
| VPR\_Tie2\_UP\_F\_SacI | CATTGAGCTCACGGCCGGTGAATTTAACG | Used to amplify 1 kb upstream of *tie2* to construct pDM4:*tie2* |
| VPR\_Tie2\_UP\_R\_HindIII | CAACAAGCTTAGGCCTTTCCTTTTTATTAACGTG |
| VPR\_Tie2\_DN\_F\_HindIII | CACGAAGCTTTCCTTGCCAACATAGCGG | Used to amplify 1 kb downstream of *tie2* to construct pDM4:*tie2* |
| VPR\_Tie2\_DN\_R\_SalI | CAGCGTCGACAATCTATAACACTCACCG |
| tssL3\_F\_pBADfix | GCTAACAGGAGGAATTAACCATGGCAGGACTTTTTAACG | Used to amplify *tssL3* to construct pTssL3 |
| tssL3\_R\_pBADfix | TTTTGTTCGGGCCCAAGCTTTTTCTGCGCTCTTCTTATCG |
| Tie1\_F\_pBADfix | GCTAACAGGAGGAATTAACCATGATAAATGATTTACAAAATGCC | Used to amplify *tie1* to construct pTie1and pTie1-2 |
| Tie1\_R\_pBADfix | TTTTGTTCGGGCCCAAGCTTGAATGTGCTCAGAATGTCCTGC | Used to amplify *tie1* to construct pTie1  |
| Tie2\_F\_pBADfix | TTTTGTTCGGGCCCAAGCTTTCACGCGGCTTCCGGGTGTG | Used to amplify *tie2* to construct pTie2 |
| Tie1\_Tie2\_R\_pBADfix | TTTTGTTCGGGCCCAAGCTTCGCGGCTTCCGGGTGTGGAGGCAGTAC | Used to amplify *tie2* to construct pTie2 and pTie1-2 |
| Ats3\_F\_pBADfix | GCTAACAGGAGGAATTAACCATGGAAAGAAAATCTATAACACTC | Used to amplify *Ats3* to construct pAts3 |
| Ats3\_R\_pBADfix | TTTTGTTCGGGCCCAAGCTTTTAGCGCTGATAGCGTTTG |