**SUPPLEMENTARY MATERIAL**

TABLE S1. **Plasmid used in this study**

|  |  |  |
| --- | --- | --- |
| Plasmid | Relevant characteristics  | Source  |
| pSVA 3116 | pETDuet-1 containing N-terminal His6 tagged *Pf*FlaI, AmpR. | (26) |
| pSVA 2167

|  |  |  |
| --- | --- | --- |
|  |  |  |

 | pETDuet-1 containing N-terminal His6 tagged *Pf*FlaH. | (26) |
| pSVA 2176 | pETDuet-1 containing K39A mutation in *Pf*FlaH  | (26) |
| pSVA 2177 | The K39A mutation *Pf*FlaH was created via round PCR on pSVA 2167 using primers 6001 and 6002. AmpR. | This study |
| pSVA 3140 | pETDuet-1 containing N-terminal StrepII-tagged *Pf*FlaI. The PCR product obtained using the 5118 and 5110 primers on pSVA 3116 was cloned using the NcoI and PstI sites. AmpR. | This study |
| pSVA 3146 | The E366A mutation in *Pf*FlaI was created via round PCR on pSVA 3140 using primers 5143 and 5144. AmpR. | This study |
| pSVA 3169 | pETDuet-1 containing N-terminal His6 tagged *Pf*FlaI-NTD. The PCR product obtained using the 5109 and 5185 primers on *P. furiosus* genomic DNA and was cloned using restriction sites EcoRI and PstI. AmpR. | This study |
| pSVA 3170 | pETDuet-1 containing N-terminal His6 tagged *Pf*FlaI-CTD. The PCR product obtained using the 5186 and 5110 primers on *P. furiosus* genomic DNA and was cloned using restriction sites EcoRI and PstI. AmpR. | This study |

TABLE S2. **Primers used in this study**. Relevant restriction sites are underlined.

|  |  |  |
| --- | --- | --- |
| Primers | Sequence and characteristics | Source |
| 5109 | 5’-GGGGAATTCGATGGCGGAAGTTATGTCAC-3’ | (26) |
| 5110 | 5’-GGGCTGCAGTCAGATTCTGAAGCTTAGTC-3’ | (26) |
| 5118 | 5’-GGGCCATGGGCTGGAGTCATCCACAATTTGAGAAGATGGCGGAAGTTATGTCAC-3’ | This study |
| 5143 | 5’-CATTATCGTCGGTGCGATTAGAGGTGC-3’ | This study |
| 5144 | 5’- CCGCACCTCTAATCGCACCGACG-3’ | This study |
| 5185 | 5’-GCGGCTGCAGAGTTGCAGCGAACTTTCTTATTGTTGCAC-3’ | This study |
| 5186 | 5’-GAATTCGCCACTCAGCATAACTCAGTTAG-3’ | This study |
| 6001 | 5’-GCACGGATGAAAATGAATTAATGATTACAACATCGGGC-3’ | This study |
| 6002 | 5’-GCCCGATGTTGTAATCATTAATTCATTTTCATCCGTGC-3’ | This study |