**S3 Table Oligonucleotides for vector construction in this study.**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Oligonucleotide sequence (5'–3')*a* | Target vector | Relevantcharacteristic |
| pET4CL3-F | CCCAAGCTTCCATGATTTCCGTAGCTAACAA | pET*4CL3* | *Hin*d III |
| pET4CL3-R | CCGCTCGAGGCTCAAAGGGGAAGCTGTAG | *Xho* I |
| pETDuet4CL3-F | GGGTACCATGGAATCGGTCAAAGAATTCC | pETDuet-*4CL3*-*STS* | *Kpn* I |
| pETDuet4CL3-R | CCTCGAGTTATGCAGAGTGATCAATTGCA | *Xho* I |
| pETDuetSTS-F | GCTGCAGATGGAATCGGTCAAAGAATTCCG | *Xho* I |
| pETDuetSTS-R | CAAGCTTCTATGCAGAGTGATCAATTGCAACG | *Hin*d III |
| pETSTS-F1 | CCCGGATCCATGGAATCGGTCAAAGAATTCCG | pET*STS*-*4CL3* | *Bam*H I |
| pETSTS-R1 | ***ACCCGATCCGGAAGA***CTATGCAGATGATCAATTG | linker |
| pET4CL3-F1 | ***TCATCTTCCGGATCGGGT***ATGATTTCCGTAGCTAACAA |
| pET4CL3-R1 | CCTCGAGGCTCAAAGGGGAAGCTGTAG | *Xho* I |
| pET4CL3-F2 | CCCGGTACCCCATGATTTCCGTAGCTAACAA | pET*4CL3*-*STS* | *Bam*H I |
| pET4CL3-R2 | ***ACCCGATCCGGAAGATGA***GCTCAAAGGGGAAGCTGTAG | linker |
| pETSTS-F2 | ***TCATCTTCCGGATCGGGT***ATGGAATCGGTCAAAGAATTC |
| pETSTS-R2 | CCTCGAGCTATGCAGAGTGATCAATTG | *Xho* I |
| Fu28-F | GGACTAGTCGATCCCGCGAAATTAATACG | pET*4CL3*-*T*-*STS* | *Kpn* I |
| Fu28-R | ***TTTGACCGATTCCAT***GGATCCGCGACCCAT | linker |
| FuSTS-F | ***GCTTGCGGCCGC***ATGGAATCGGTCAAAGAATT |
| FuSTS-R | CCTCGAGCTATGCAGAGTGATCAATTGCAACG | *Xho* I |
| pET4CL3-F2 | CCCGGTACCCCATGATTTCCGTAGCTAACAA | *Bam*H I |
| pET4CL3-R2 | CCTCGAG ACTAGTTTAGCTCAAAGGGGAAGCT | *Xho* I *Kpn* I |
| EGFP-F | GGGTACCATGGTGAGCAAGGGCGA | pLGNL-*EGFP* | *Bam*H I |
| EGFP-R | GGGATCCCTTGTACAGCTCGTCCATGC | *Spe* I |
| Ma4CL3-F3 | GGGATCCATGATTTCCGTAGCTAACAA | pLGNL-*EGFP::Ma4CL3* | *Spe* I |
| Ma4CL3-R3 | GACTAGTCTACTCGAGGCTCAAAGGGG | *Kpn* I |
| Ma4CL3-F4 | GGAATTCATGATTTCCGTAGCTAACAA | pLGNL-*Ma4CL3::EGFP* | *Eco*R I |
| Ma4CL3-R4 | GGGATCCCTACTCGAGGCTCAAAGGGG | *Spe* I |

*a* Short underlined nucleotides indicate restriction enzyme sites and bold italics nucleotides represent homology arms.