**S4 Table.** Table showing the primer sequences of wild-type and mutants (F is for forward primer, R is for reverse primer, restriction enzyme sites were indicated in the name of each primer)

|  |  |
| --- | --- |
| Construct | Primer |
| F\_Nde1 | GGCATTCCATATGATGAGGAGAAGTGAGGTGCTG |
| 486\_R\_Xhol | CCGCTCGAGACGTGCTTTGCCCGGTGTATT |
| DD\_R\_Xhol | GAAAGACTCCATCATCACCATCACCATUAGCCTCGAGG |
| R2E/F | AGAAGGAGATATACATATGGAGAGAAGTGAGGTGCTG |
| R2E/R | CAGCACCTCACTTCTCTCCATATGTATATCTCCTTCT |
| R2M/F | AGAAGGAGATATACATAGGATGAGAAGTGAGGTGCTGG |
| R2M/R | CCAGCACCTCACTTCTCATCCTATGTATATCTCCTTCT |
| N+4/F | AGAAGGAGATATACATATGGGCGCAGCAGCAATGAGGAGAAGTGAGGTG |
| N+4/R | CACCTCACTTCTCCTCATTGCTGCTGCGCCCATATGTATATCTCCTTCT |
| L51A/F | GCATATCAAGGAACTCGCAGATATGATGATTGCTG |
| L51A/R | CAGCAATCATCATATCTGCGAGTTCCTTGATATGC |
| L50A/F | GAAGCATATCAAGGAAGCACTGGATATGATGATTG |
| L50A/R | CAATCATCATATCCAGTGCTTCCTTGATATGCTTC |
| I55A/F | ACTCCTGGATATGATGGCAGCTGAAGAGGAAAGCC |
| I55A/R | GCTTTCCTCTTCAGCTGCCATCATATCCAGGAGT |
| E57A/F | GGATATGATGATTGCTGCAGAGGAAAGCCTGAAGG |
| E57A/R | CCTTCAGGCTTTCCTCTGCAGCAATCATCATATCC |
| E57R/F | GGATATGATGATTGCTCGAGAGGAAAGCCTGAAGG |
| E57R/R | CCTTCAGGCTTTCCTCTCGAGCAATCATCATATCC |
| E58R/F | GGATATGATGATTGCTCGAGAGGAAAGCCTGAAGG |
| E58R/R | CCTTCAGGCTTTCCTCTCGAGCAATCATCATATCC |
| E58A/F | TATGATGATTGCTGAAGCGGAAAGCCTGAAGGAAAG |
| E58A/R | CTTTCCTTCAGGCTTTCCGCTTCAGCAATCATCATA |
| E49A/F  | AAAGAAGCATATCAAGGCACTCCTGGATATGATGA |
| E49A/R | TCATCATATCCAGGAGTGCCTTGATATGCTTCTTT |