

Table S3. Primers used in this study.

| Primer | Sequence (5'-3')* |
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| BsaI-pet-F | ATGGTAGGTCTCAAATGAACAAAATCTACTCTATC |
| HindIII-pet-R | GCGCAAGCTTTTATCAATGATGATGATGATGATGACC |
| SacI-pet-F | TTTCTGAGCTCGCCAAAAAAGTTATCTGC |
| PetSS-BglII-AflII-BstBI-R | TTCGAACTTAAGAGATCTAGGTGATGGTGATGGTGATGCGCCGCGTATGATGTTGGTGTAAG |
| BglII-ESAT6-F | GCGAGATCTGATGACCGAACAGCAGTGGAAAC |
| BstBI-ESAT6-F | GGCGTTTCGAAAATGACCGAACAGCAGTGGAAAC |
| BstBI-ESAT6-R | TATATTCGAATCGCCGCCAGCGAACATG |
| PstI-ESAT6-R | ATCCTGCAGAGCCGCCAGCGAACATGC |
| BglII-Ag85B-F | CCAAGATCTGATGACCGACGTTTCTCGTAA |
| BstBI-Ag85B-R | TCCCTTCGAATCGCCGCCACCAGCACCCAG |
| BglII-Pmp17-F | AATAAGATCTGAACGACGCGCAGACCCG |
| BstBI-Pmp17-R | TATATTCGAATCCGCCAGTTTCGCCGGAG |
| BglII-SapA-F | GCCGAGATCTGACCACCTATGATACCTGGACC |
| PstI-SapA-R | CCGGCTGCAGAGCCATCGCTGTTTCATCGCAATG |
| BglII-YapA-F | ACGTAGATCTGGTTTCTCAGATCGCGACCACCG |
| PstI-YapA-R | TAGCCTGCAGACGCGTTAGACATGTCAACCGTACC |
| BglII-mCherry-F | GCCGAGATCTGATGGTTTCTAAAGGTGAAGAAGAC |
| PstI-mCherry-R | CCGTCTGCAGATTTATACAGTTCGTCCATACCCG |
| PstI-TSYQ-del1-F | TATGCTGCAGACACCTCTTACCAGGGTTCTATCAAAGC |
| PstI-TLTV-del2-F | TATACTGCAGACACCCTGACCGTTGACGAACTGACC |
| PstI-NLLL-del3-F | TATACTGCAGACAACCTGCTGCTGGTCGACTTCATCG |
| PstI-TPEI-del12-F | TATACTGCAGACACCCCGGAAATCAAACAGCAGG |
| PstI-YKAF-del20-F | TATGCTGCAGACTACAAAGCGTTCCTGGCGGAAG |
| PstI-GNDK-del4-F | TATGCTGCAGACGGTAACGACAAAAACGGTCTGAAC |
| PstI-VKAP-del5-F | TATACTGCAGACGTTAAAGCGCCGGAAAACACCTC |
| PstI-FKTE-del6-F | TATGCTGCAGACTTCAAACCGGAAACCCAGACCATC |
| PstI-TGYK-del17-F | TATCCTGCAGACACCCGGCTACAAAACCGTTGCG |
| PstI-TETQ-del7-F | TATACTGCAGACACCGAAAACCCAGACCATCGG |
| PstI-TQTI-del8-F | TATACTGCAGACACCCAGACCATCGGTTTCTCTG |
| PstI-TIGF-del9-F | CATACTGCAGACACCATCGGTTTCTCTGACGTTACC |
| PstI-GFSD-del10-F | TGTACTGCAGACGGTTTCTCTGACGTTACCCCG |
| PstI-SDVT-del11-F | TCTGCTGCAGACTCTGACGTTACCCCGGAAATC |
| PstI-KQQE-del13-F | GGCACTGCAGACAAACAGCAGGAAAAAGACGGTAAATC |
| PstI-KDG-del14-F | GGCACTGCAGACAAAGACGGTAAATCTGTTTGACC |
| PstI-KSV-del15-F | GGCACTGCAGACAAATCTGTTTGACCCTGACC |
| PstI-WTL-del16-F | TATACTGCAGACTGGACCCTGACCGGCTACAAAACC |
| PstI-ANAD-del18-F | GGCACTGCAGACGCGAACGCGGACGCGGCG |
| PstI-ATSL-del19-F | GGCACTGCAGACGCGACCTCTCTGATGTCTGGTGG |
| SbfI-FKAG-Pic-del6-F | GGCACCTGCAGGCTTTAAGGCCGGCACCCGGGTGAC |
| SbfI-TPTL-Pic-del12-F | GGCACCTGCAGGCACCCCAACCCTGCATGTTGATACC |
| SbfI-DGFK-Pic-del17-F | GGCACCTGCAGGCGATGGTTTTAAAGCGGAGGCTGATAAAG |
| SbfI-ADSF-Pic-del19-F | GGCACCTGCAGGCGCTGACAGTTTCATGAATGCCGGG |
| SbfI-YKNF-Pic-del20-F | GGCACCTGCAGGCTATAAAAACCTTCATGACGGAAGTTAAC |
| HindIII-Pic-end-R | GCGCAAGCTTTCAGAACATATACCGGAAATTCGCG |
| pASK-IBA33+ For seq | GAGTTATTTTACCCTCCCT |
| pASK-IBA33+ Rev seq | CGCAGTAGCGGTAACG |
| pet600For seq | ATCTTCTGCGAACTACC |
| pet1320For seq | GGTGGTTTTCATCTTCGA |
| pet2880For seq | TCTTCAACACCCTGACC |
| pet3660For seq | TTCTCACTCTTGCTACG |
| pet2041For seq (Spe/BstG) | TTCTGACCTGTCTCAGC |
| pet2710 For seq | TACCAGGGTTCTATCAAAGCG |
| pet2731 Rev seq | CCGCTTTGATAGAACCCTGG |

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| pet3401 Rev seq | TCCAGACCGTCCAGTTCG |
| Site directed mutagenesis primers | |
| AC Ile to Ala F | GACGTTACCCCGGAAGCGAAACAGCAGGAAAAAG |
| AC Ile to Ala R | CTTTTCCTGCTGTTTCGCTTCCGGGGTAACGTC |
| AC Ile to Lys F | GACGTTACCCCGGAAAAAAAACAGCAGGAAAAAG |
| AC Ile to Lys R | CTTTTCCTGCTGTTTTTTTCCGGGGTAACGTC |
| AC W to Ala F | AAAGACGGTAAATCTGTTGCGACCCTGACCGGCTAC |
| AC W to Ala R | GTAGCCGGTCAGGGTCGCAACAGATTACCGTCTTT |
| AC W to Lys F | AAAGACGGTAAATCTGTTAAAACCCTGACCGGCTAC |
| AC W to Lys R | GTAGCCGGTCAGGGTTTTAACAGATTACCGTCTTT |
| AC Leu to Ala F | GTAAATCTGTTTGGACCGCGACCGGCTACAAAACC |
| AC Leu to Ala R | GGTTTTGTAGCCGGTCGCGGTCCAAACAGATTAC |
| AC Leu to Lys F | GTAAATCTGTTTGGACCAAAACCAGGCTACAAAACC |
| AC Leu to Lys R | GGTTTTGTAGCCGGTTTTGGTCCAAACAGATTAC |
| AC Gly to Ala F | CTGTTTGGACCCTGACCGCGTACAAAACCGTTGCG |
| AC Gly to Ala R | CGCAACGGTTTTGTACGCGGTTCAGGGTCCAAACAG |
| AC Gly to Lys F | CTGTTTGGACCCTGACCAAAATACAAAACCGTTGCG |
| AC Gly to Lys R | CGCAACGGTTTTGTATTTGGTTCAGGGTCCAAACAG |

* Restriction sites engineered on primers are in **bold font**; mutated nucleotides are in grey