**TABLE S2.** **Primers used in this study**

|  |  |  |
| --- | --- | --- |
| Primers | Sequence (5'-3') | **For construction** |
| F\_0263 | CCCAAGCTTCCTGACCCTGCTCGACAAGC | NK0263 |
| R\_0263 | CCCAAGCTTAGGCACCGGTTTCGTGGC |
| F\_0286 | CCCAAGCTTGTGCATCCTGATCATCGA | NK0286 |
| R\_0286 | CCCAAGCTTAGTTGACCGCAACGAACG |
| F\_0329 | CCCGAATTCATGACCATCCCTTGTTTCG | NK0329 |
| R\_0329 | CCCAAGCTTTCGCGTTCTTCGCTGTC |
| F\_0538 | CCCAAGCTTAGCAGCATCTGGTGGAGC | NK0538 |
| R\_0538 | CCCAAGCTTACCTTGGTCACCAGCAGG |
| F\_0615 | CCCAAGCTTGCTGGATTACCTGATGAAACC | NK0615 |
| R\_0615 | CCCAAGCTTTAATTGATCGCGCAGGCT |
| F\_0677 | CGCGGATCCCGCCATCCGTACCATTCTT | NK0677 |
| R\_0677 | CCCAAGCTTCACCTGCTTGAGCACTTCCAG |
| F\_0722 | CCCAAGCTTACGACGACCCTGATCTGC | NK0722 |
| R\_0722 | CCCAAGCTTGGGTGTTCGACAAAGGTG |
| F\_0758 | GGGTCTAGAGACTGACCTCACTGCCATCC | NK0758 |
| R\_0758 | GGGAAGCTTGAACACGCTTTCTTCCACC |
| F\_0833 | CGCGGATCCAATGATCGGCGAATACCTGG | NK0833 |
| R\_0833 | CCCAAGCTTAGCTCCTGAATCGCAAACG |
| F\_0882 | CCCAAGCTTTGATTGCCACCACCGATCC | NK0882 |
| R\_0882 | CCCAAGCTTGCGCTTGAACAGTACGGT |
| F\_1041 | CCCAAGCTTGATCGTCGATGACGAACC | NK1041 |
| R\_1041 | CCCAAGCTTAGCAGGCGATATTCGGTC |
| F\_1120 | CGCGGATCCACGAAATCATCATCGCCACC | NK1120 |
| R\_1120 | CCCAAGCTTCCATCACTTCCAGCAGTTCATCTT |
| F\_1197 | CCCAAGCTTGCTGGTCATTGAAGACAACC | NK1197 |
| R\_1197 | CCCAAGCTTGATACAGATGCAGCACCT |
| F\_1206 | CCCAAGCTTAGATTCCGCAGATCCAGC | NK1206 |
| R\_1206 | CCCAAGCTTGTTCTTGATGGTGCCCTC |
| F\_1459 | CGCGGATCCTCGTGCTGGATGTGGAAAT | NK1459 |
| R\_1459 | CCCAAGCTTACTGCAATCTGGCACAAGC |
| F\_1461 | CCCATCGCTGTTGCTGGTGGA | NK1461 |
| R\_1461 | CCCAAGCTTTCGGTGAAGGGAATGCTG |
| F\_1513 | CCCAAGCTTTTCTGCTGGTAGAAGACGACG | NK1513 |
| R\_1513 | CCCAAGCTTGTCGGTGTCAAATCCAGC |
| F\_1838 | CCCGGATCCGCTGGTGTTCGCCAAATC | NK1838 |
| R\_1838 | CCCAAGCTTAATGCCTCACGGAAATGC |
| F\_1848 | CCCGGATCCGTGGTGGTCAGTGGCGTGTA | NK1848 |
| R\_1848 | CCCAAGCTTTAAGCCGGTGAGGAAGTCG |
| F\_2023 | CCCAAGCTTTCGACGACGACACCTTGTA | NK2023 |
| R\_2023 | CCCAAGCTTATATGCTCCCACTGCAGG |
| F\_2103 | CCCGGATCCTGTTGCTGCTGGACTACCG | NK2103 |
| R\_2103 | CCCAAGCTTGCGTTTCATCACGCTCATCT |
| F\_2117 | CCCGGATCCGCTGGAAGGTTATGCGGAAGA | NK2117 |
| R\_2117 | CCCAAGCTTGCATTTGCGGCGACAGA |
| F\_2142 | CGCGGATCCGATGGTGTCTTTCGCCCTTAC | NK2142 |
| R\_2142 | CCCAAGCTTTTTGCCTTCGGACTTCTTGT |
| F\_2163 | CGCGGATCCCCTGATCGTGGACGACTTCT | NK2163 |
| R\_2163 | CCCAAGCTTGGTGAACGGCTTGATGATGT |
| F\_2201 | CGCGGATCCGCTCAATATCGTGGGCAGTG | NK2201 |
| R\_2201 | CCCAAGCTTTGCTCGGCATCATCGAAGTG |
| F\_2203 | CCCAAGCTTCCATGACCGACGTACTGC | NK2203 |
| R\_2203 | CCCAAGCTTAGCAGCACCAGATCGTTG |
| F\_2221 | CCCTCTAGAGGCCCAGGTTATCTGGTTG | NK2221 |
| R\_2221 | CCCAAGCTTATTTCCGTCGTCAGCGTAT |
| F\_2227 | CCCGGATCCATTGCCGCTGTCGGTGTT | NK2227 |
| R\_2227 | CCCAAGCTTTCGTGGACGAAGTTGACGT |
| F\_2300 | CGCGGATCCTCGACGACGATGCTTCGAT | NK2300 |
| R\_2300 | CCCAAGCTTCGTTCTTCATCGCTTCCAC |
| F\_2338 | TGCTCTAGACAAGCTGCATTCCCGTTCCT | NK2338 |
| R\_2338 | CCCAAGCTTAATGGCTTGGGCAGGTAGTC |
| F\_2384 | CGCGGATCCCGTGCGTACAGGCATGAAGA | NK2384 |
| R\_2384 | CCCAAGCTTGCACGGAGACAATGATGACG |
| F\_2451 | CCCAAGCTTATGCCATGCTGCTCGACCTGCA | NK2451 |
| R\_2451 | CCCAAGCTTCCCTGGACAACGCGCCAA |
| F\_2969 | CGCGGATCCATCCCATCCACGTCTATTGC | NK2969 |
| R\_2969 | CCCAAGCTTTCGGAGGTCAGCGGTTTGAT |
| F\_3092 | CGCGGATCCCAGCGCAGTCTTCAGTCAAT | NK3092 |
| R\_3092 | CCCAAGCTTATGTAGTCGCTGGCACCTTG |
| F\_3093 | CGCGGATCCACTCGCAGGACTGAAGGTG | NK3093 |
| R\_3093 | CCCAAGCTTAAGAGCTGGTTGCCCTTG |
| F\_3121 | CGCGGATCCGAGACCTGCTCATGCCAC | NK3121 |
| R\_3121 | CCCAAGCTTGGGCAGGTTATACGGTGCTT |
| F\_3223 | CGCGGATCCCTCGGTGTTTTCCGATGAAC | NK3223 |
| R\_3223 | CCCAAGCTTGCAACTGGTATGGACCAACG |
| F\_3288 | CCCAAGCTTTCGATTTCGTCAGCAAACC | NK3288 |
| R\_3288 | CCCAAGCTTTTCGTCCAGGAACAAGGT |
| F\_3305 | CCCAAGCTTGTCACACGGTGGACTTCG | NK3305 |
| R\_3305 | CCCAAGCTTCCAGCGTGTCCAGGTTGT |
| F\_3382 | CGCGGATCCGCATTCTGCTGGTTGAAGACG | NK3382 |
| R\_3382 | CCCAAGCTTATTGGTGTCGAACGGCTTG |
| F\_3485 | CGCGGATCCCTTGCGTATTCTGTTCGTTGG | NK3485 |
| R\_3485 | CCCAAGCTTAGCGCAATACGAATGGTGTCC |
| F\_3522 | CGCGGATCCCATGGCCGATCTCACTATTCT | NK3522 |
| R\_3522 | CCCAAGCTTCGGATGATCGTTGGAGGAG |
| F\_3525 | CCCAAGCTTTGCTGGTCGAAGACAACG | NK3525 |
| R\_3525 | CCCAAGCTTTCCAGCGTCAAGGTATGC |
| F\_3684 | CCCAAGCTTCAGCTCCGTCAGCGTCAC | NK3684 |
| R\_3684 | CCCAAGCTTCCGCTTCGAACTTGCCTG |
| F\_3745 | CGCGGATCCTGTCTATCCGTGCTTCCCTAC | NK3745 |
| R\_3745 | CCCAAGCTTTCAACACGACGATGCCCAGT |
| F\_3771 | CGCGGATCCTGGTGTTCGTCACTGCCTAC | NK3771 |
| R\_3771 | CCCAAGCTTTCCAGCACATCCAGCAGTTC |
| F\_3778 | CGCGGATCCTCTTGTGGTCGAGGACGATT | NK3778 |
| R\_3778 | CCCAAGCTTGTTGTAGGGCTTCATGCAGTAG |
| F\_3779 | CGCGGATCCGGAGTTCTGCGATCAGGTGGTT | NK3779 |
| R\_3779 | CCCAAGCTTTCACGATGCTGTCGCTTTTGC |
| F\_3947 | CGCGGATCCGAGATCCGGTTGTTTCCAC | NK3947 |
| R\_3947 | CCCAAGCTTGATCCGGGTGATAGTCCTG |
| F\_4109 | CCCAAGCTTACGACTGGATCGCCGATG | NK4109 |
| R\_4109 | CCCAAGCTTCAGCAGGCAGAACGCAAC |
| CF\_2201 | CGCGGATCCTCGATGCGCTACGAGACCCT | CNK2201 |
| CR\_2201 | CCCAAGCTTTGAAGTCCATAAATTCGAGCAG |
| F\_pK18mobCOM | GCCGATTCATTAATGCAGCTGGCAC | Mutant confirmation |