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| --- | --- | --- | --- | --- |
| **Reagent type (species) or resource** | **Designation** | **Source or reference** | **Identifiers** | **Additional information** |
| sequence-based reagent | EGFP-GRAMD1b 674-718aa(gBlock) | This paper | BEP-1 | GAGATATACCATGGGGATGGTTAGTAAAGGTGAGGAACTGTTCACAGGGGTGGTCCCCATTCTTGTGGAGTTAGATGGAGATGTGAACGGACATAAATTCAGCGTAAGTGGCGAGGGCGAGGGCGACGCCACCTACGGAAAATTGACCCTTAAATTCATTTGCACTACTGGAAAATTGCCAGTCCCGTGGCCTACATTGGTCACCACCCTGACTTACGGAGTGCAGTGCTTCTCTCGCTACCCTGACCACATGAAACAACACGACTTCTTTAAGTCCGCTATGCCTGAGGGCTACGTGCAGGAACGCACGATTTTTTTCAAAGATGACGGCAATTACAAGACCCGCGCAGAAGTTAAATTTGAGGGCGACACACTGGTAAATCGCATCGAATTAAAGGGAATTGACTTTAAAGAGGACGGAAACATTCTTGGTCATAAACTGGAGTATAATTACAATAGTCACAATGTATATATCATGGCCGACAAACAGAAAAATGGGATTAAGGTTAATTTTAAAATTCGTCATAACATTGAAGACGGCTCTGTGCAATTAGCAGACCATTACCAGCAAAATACACCGATCGGAGACGGCCCTGTTTTACTTCCTGATAACCATTACTTATCCACGCAGAGTGCCCTTAGTAAGGACCCAAACGAGAAACGTGATCATATGGTATTACTGGAGTTCGTCACGGCTGCTGGCATTACGCTTGGTATGGATGAATTATATAAGGGTGGAGGCGGTTCCGGCGGAGGTGGCTCCGGCGGTGGCGGATCCTCTCAGACCGAGTGGGCGCAGTTGTTGGAATCCCAACAAAAGTATCACGATACCGAACTGCAAAAATGGCGTGAAATCATTAAAAGTAGCGTGATGTTGCTGGATCAAATGAAAGACTCCTTGATTAATTTACAGCTCGAGCACCACCA |
| sequence-based reagent | 5'NcoI\_EGFP\_1b\_Helix(primers) | This paper | BEP-2 | GAGATATACCATGGGGATGGTTAGTAAAGGTGAGGAACTG |
| sequence-based reagent | 3'XhoI\_eGFP\_1b\_Helix(primers) | This paper | BEP-3 | TGGTGGTGCTCGAGCTGTAAATTAATCAAGGAGTCTTTC |
| sequence-based reagent | EGFP-GRAMD1b\_Helix\_5E(gBlock) | This paper | BEP-4 | GCCACCTACGGAAAATTGACCCTTAAATTCATTTGCACTACTGGAAAATTGCCAGTCCCGTGGCCTACATTGGTCACCACCCTGACTTACGGAGTGCAGTGCTTCTCTCGCTACCCTGACCACATGAAACAACACGACTTCTTTAAGTCCGCTATGCCTGAGGGCTACGTGCAGGAACGCACGATTTTTTTCAAAGATGACGGCAATTACAAGACCCGCGCAGAAGTTAAATTTGAGGGCGACACACTGGTAAATCGCATCGAATTAAAGGGAATTGACTTTAAAGAGGACGGAAACATTCTTGGTCATAAACTGGAGTATAATTACAATAGTCACAATGTATATATCATGGCCGACAAACAGAAAAATGGGATTAAGGTTAATTTTAAAATTCGTCATAACATTGAAGACGGCTCTGTGCAATTAGCAGACCATTACCAGCAAAATACACCGATCGGAGACGGCCCTGTTTTACTTCCTGATAACCATTACTTATCCACGCAGAGTGCCCTTAGTAAGGACCCAAACGAGAAACGTGATCATATGGTATTACTGGAGTTCGTCACGGCTGCTGGCATTACGCTTGGTATGGATGAATTATATAAGGGTGGAGGCGGTTCCGGCGGAGGTGGCTCCGGCGGTGGCGGATCCTCTCAAACAGAATGGGCACAACTTCTGGAGTCGCAGCAAAAGTATCACGATACCGAGGAACAAAAAGAACGTGAAGAGGAAAAGTCCAGTGTGATGTTGGAGGACCAAATGAAAGATTCGTTAATCAATTTACAGCTCGAGCACCACCA |
| sequence-based reagent | GRAMD1a\_I429SNPL\_F(primers) | This paper | BEP-13 | accaccaGGCCCCAAGAGCGCCTCC |
| sequence-based reagent | GRAMD1a\_I429SNPL\_R(primers) | This paper | BEP-14 | ggtggtggGGGGATGGTGTACGTCAGCAC |
| sequence-based reagent | D4\_D434S\_F(primers) | This paper | BEP-104 | AAATTATCAAtcaAAAACAGCTCACTATTCAAC |
| sequence-based reagent | D4\_D434S\_R(primers) | This paper | BEP-105 | CCATCCCATGTTTTATGAG |
| sequence-based reagent | 3'\_KpnI-stop\_GRAMD1b\_683aa(primers) | This paper | TNP-33 | GGGCCCGCGGTACCTCAGTACTTTTGTTGGGACTCTAAGAGC |
| sequence-based reagent | 3’ KpnI D4\_Mam\_Stop(primers) | This paper | LK016 | GGGCCCGCGGTACCTTAATTGTAGGTTATGGAACTACCTG |
| sequence-based reagent | 5’ EcoRI D4\_Mam(primers) | This paper | LK015 | CAAGCTTCGAATTCAAAGGGGAAAATCAATTTGGACCATT |
| sequence-based reagent | 3'-BamHI-stop-GRAMD1b-C-AS(primers) | This paper | TNP-55 | TCTAGATCCGGTGGATCCTCAATGATAGCGATTCCTCTTTTCTTC |
| sequence-based reagent | Genotyping\_1B\_F2(primers) | This paper | LK164 | GACTGTGCTCATATTAGCCAGAGACCTAAGTGC |
| sequence-based reagent | Genotyping\_1B\_R1(primers) | This paper | LK165 | CAGAGTGGTGGGTGAGCCTCATAAGGCTTCGG |
| sequence-based reagent | GRAMD1a \_Stop\_R(primers) | This paper | LK215 | GCCCGCGGTACCTCAGGAAAAGCTGTCATCGGGCCGGGGC |
| sequence-based reagent | GRAMD1a\_F(primers) | This paper | LK214 | CTCAGATCTCGAGAAATGTTCGACACCACACCCCACTCTG |
| sequence-based reagent | GRAMD1a\_GRAM Domain\_F(primers) | This paper | DKP-29 | GTCCGGACTCAGATCTCGAGAAATGCTGAGCCCCACTTATAAG |
| sequence-based reagent | GRAMD1a\_GRAM Domain\_R(primers) | This paper | DKP-30 | GTGGATCCCGGGCCCGCGGTACCTCACTCTGAGCCGTAGCACTG |
| sequence-based reagent | GRAMD1a\_Genotyping\_V2V3\_F2(primers) | This paper | TNP-9 | AAAGGACTGGGGTGTGGCCTCCTCATG |
| sequence-based reagent | GRAMD1a\_Genotyping\_V2V3\_R2(primers) | This paper | TNP-11 | TTGAGGCTCAAACACCCTCTGTAGATG |
| sequence-based reagent | GRAMD1a-sgRNA#1\_AS(primers) | This paper | LK186 | AAACTGCGTCAGCACCTCGGAGTCC |
| sequence-based reagent | GRAMD1a-sgRNA#1\_S(primers) | This paper | LK185 | CACCGGACTCCGAGGTGCTGACGCA |
| sequence-based reagent | GRAMD1b DeltaNterm F(primers) | This paper | LK035 | CAGATCTCGAGAAACAGCTCGCCTCATTCCCAATGCCATCCAAGTTTGC |
| sequence-based reagent | GRAMD1b\_434LTNPL\_F(primers) | This paper | TNP-73 | TCCTCCTGCTCCCAAAACTGCCACT |
| sequence-based reagent | GRAMD1b\_434LTNPL\_R(primers) | This paper | TNP-74 | GGAGGAGGGGTGATGGTGTAAAGAATCAC |
| sequence-based reagent | GRAMD1b\_F(primers) | This paper | LK216 | TCAGATCTCGAGAAATGAAAGGATTCAAGCTCTCCTGCAC |
| sequence-based reagent | GRAMD1b\_Short GRAM Domain\_F(primers) | This paper | DKP-31 | GGACTCAGATCTCGAGAAAAGCAGAGAAATGAAGACTTCAGAAAGC |
| sequence-based reagent | GRAMD1b\_Short GRAM Domain\_R(primers) | This paper | DKP-32 | GGATCCCGGGCCCGCGGTACCTCACTTTTCAAGGAGAGCATTCTGC |
| sequence-based reagent | GRAMD1b\_Helix\_2\_5E\_F(primers) | This paper | TNP-49 | GAAATCCTCAGTGATGCTCGAGATCAACCTTCAGAACGGC |
| sequence-based reagent | GRAMD1b\_Helix\_2\_5E\_R(primers) | This paper | TNP-50 | TCCTCTTCCCTCTCTTTTTGCTCCTCAGTATCGTGGTACTTTTG |
| sequence-based reagent | GRAMD1b\_Helix4E\_F(primers) | This paper | TNP-44 | GTCCCAACAAAAGGAACACGATACTGAGCTCCAAAAATG |
| sequence-based reagent | GRAMD1b\_Helix4E\_R(primers) | This paper | TNP-45 | TCTTCTTCCTGGGCCTCTTCTGTCTGAGACTGGGG |
| sequence-based reagent | GRAMD1b\_Stop\_R(primers) | This paper | LK217 | GGCCCGCGGTACCTCAATGATAGCGATTCCTCTTTTCTT |
| sequence-based reagent | GRAMD1b\_T469D\_F(primers) | This paper | TNP-57 | CGAAGTCCTCGACCACGACGTG |
| sequence-based reagent | GRAMD1b\_T469D\_R(primers) | This paper | TNP-58 | GCATCTATCACGTAACATTC |
| sequence-based reagent | GRAMD1b\_Y430A\_V445A\_F(primers) | This paper | TNP-77 | CTGGCTCCCAAAACTGCCACTGCCAGGGAGACACAGACCATG |
| sequence-based reagent | GRAMD1b\_Y430A\_V445A\_R(primers) | This paper | TNP-78 | AGGGTTGGTAAGGGTGATGGTGGCAAGAATCACTCGGCTCTG |
| sequence-based reagent | GRAM of GRAMD1B Rev(primers) | This paper | LK223 | CCGCCGTACCTCATTTTTCTTTAGTCATGGAACAGATGTCTTTCAAACGG |
| sequence-based reagent | 5'\_GRAMD1b\_iEcoRV\_Fw\_HiFi(primers) | This paper | TNP-107 | AGCAGCGGCGCTTCTCTGATATC |
| sequence-based reagent | 3'\_GRAMD1b\_621\_Rv\_HiFi(primers) | This paper | TNP-108 | GGACACGCTCTGCAGGTGGAAAC |
| sequence-based reagent | 5'\_GRAMD1b-Sec61b\_TM\_Fw\_HiFi(primers) | This paper | TNP-109 | TCCACCTGCAGAGCGTGTCCAAAGTTGGCCCTGTTCCAGTATTG |
| sequence-based reagent | 3'\_pEGFP\_Sec61b\_TM\_Rv\_HiFI(primers) | This paper | TNP-110 | GGTGGATCCCGGGCCCGCGGTACCCTACGAACGAGTGTACTTGC |
| sequence-based reagent | GRAMD1b-sgRNA#1\_AS(primers) | This paper | LK154 | AAACCACGGGTGAGCGTGTAGCGAC |
| sequence-based reagent | GRAMD1b-sgRNA#1\_S(primers) | This paper | LK153 | CACCGTCGCTACACGCTCACCCGTG |
| sequence-based reagent | GRAMD1c\_F(primers) | This paper | LK218 | CTCAGATCTCGAGAAATGGAGGGCGCTCCGACTGTCCGTC |
| sequence-based reagent | GRAMD1c\_GRAM Domain\_F(primers) | This paper | DKP-35 | CAAGTCCGGACTCAGATCTCGAGAAAAAGACAGGAATGAGGAATAC |
| sequence-based reagent | GRAMD1c\_GRAM Domain\_R(primers) | This paper | DKP-36 | GATCCCGGGCCCGCGGTACCCTATTCCTGTCTAGTCAGGCTC |
| sequence-based reagent | GRAMD1c\_Genotyping\_F1(primers) | This paper | DKP-1 | GGGGAATATGCCACATTTAAGGAGA |
| sequence-based reagent | GRAMD1c\_Genotyping\_R1(primers) | This paper | DKP-3 | GGTTTGTTTGAATTAGGAGTGGGTTG |
| sequence-based reagent | GRAMD1c\_Stop\_R(primers) | This paper | LK219 | CGGGCCCGCGGTACCCTAGCTTTCAACAGCCATGCCAGTC |
| sequence-based reagent | GRAMD1c-sgRNA#1\_AS(primers) | This paper | TNP-28 | AAACAGGGGTAGATACTACATCTAC |
| sequence-based reagent | GRAMD1c-sgRNA#1\_S(primers) | This paper | TNP-27 | CACCGTAGATGTAGTATCTACCCCT |
| sequence-based reagent | GRAMD1c-sgRNA#2\_AS(primers) | This paper | TNP-30 | AAACACACTATAGTCCTTAATAGTC |
| sequence-based reagent | GRAMD1c-sgRNA#2\_S(primers) | This paper | TNP-29 | CACCGACTATTAAGGACTATAGTGT |
| sequence-based reagent | GRAMD3\_F(primers) | This paper | DD007 | GCAGTCGACATGACTGAACTACAGCAAGATGTGG |
| sequence-based reagent | GRAMD3\_Stop\_R(primers) | This paper | DD008 | CAGTCATGGTACCTCAGTCACCATTCTCAAGCAACTTCTG |
| sequence-based reagent | 5'\_NheI\_miRFP\_S(primers) | This paper | TNP-89 | GTCAGATCCGCTAGCGCCACCATGGTAGCAGGTCATGCCTCTGG |
| sequence-based reagent | 3'\_NotI\_miRFP\_AS(primers) | This paper | TNP-90 | CCGGAACCGCGGCCGCGCTCTCAAGCGCGGTGATCCGC |
| sequence-based reagent | 5'\_NotI\_FKBP\_linker\_S(primers) | This paper | TNP-91 | CTCGAAGCGCGGCCGCGGGAGCAGGAGGAG |
| sequence-based reagent | 3'\_KpnI\_FKBP\_linker\_AS(primers) | This paper | TNP-92 | TTGGCCGTGGTACCACTACCACCAGCACTACCACC |
| sequence-based reagent | ssDNA\_StopKI\_HR\_GRAMD1a\_V2(primers) | This paper | TNP-24 | GTGGGCAGTGTAGAAGTAGTCCTGGTAGGGGATGCCCTGCGGATCCCGGGCCCGCGGTACCGAATTCGAAGCTTGAGCTCGAGATCTACTAGTTAATCAGTCAGCACCTCGGAGTCCACCACACACCCGCCGGCCTGGG |
| sequence-based reagent | 5'\_XHOI\_ORP9\_NS(primers) | This paper | TNP-123 | ACTCAGATCTCGAGCTATGGTAGAATCAATTAAACACTGCATTG |
| sequence-based reagent | 3'\_HINDIII\_STOP\_ORP9\_CAS(primers) | This paper | TNP-124 | TACCGAATTCGAAGCTTCTAATGCTTGGCAGCACCAAGACGTTTC |
| sequence-based reagent | 5'\_HINDIII\_OSBP\_NS(primers) | This paper | TNP-129 | CTCGAGCTCAAGCTTCGATGGCGGCGACGGAGCTGAGAGGAGTGG |
| sequence-based reagent | 3'\_BAMHI\_STOP\_OSBP\_CAS(primers) | This paper | TNP-130 | AGATCCGGTGGATCCTCAGAAAATGTCCGGGCATGAGCTCCAGTC |
| sequence-based reagent | 5'\_OSBP\_SEQ\_FW\_2(primers) | This paper | TNP-161 | AAGTCACTACAGTATGAAAGAGACC |
| sequence-based reagent | 5'\_ORP4\_SEQ\_FW\_1(primers) | This paper | TNP-162 | CTGAAGTTAGATGACCTCAGCACG |
| sequence-based reagent | BSRG1-D4\_E.COLI-BAMHI)(gBlock) | This paper | TNG-3 | GACGAGCTGTACAAGTCCGGAAAGGGAAAAATAAACTTAGATCATAGTGGAGCCTATGTTGCACAGTTTGAAGTAGCCTGGGATGAAGTTTCATATGACAAAGAAGGAAATGAAGTTTTAACTCATAAAACATGGGATGGAAATTATCAAGATAAAACAGCTCACTATTCAACAGTAATACCTCTTGAAGCTAATGCAAGAAATATAAGAATAAAAGCAAGAGAGTGTACAGGCCTTGCTTGGGAATGGTGGAGAGATGTTATAAGTGAATATGATGTTCCATTAACAAATAATATAAATGTTTCAATATGGGGAACAACTTTATACCCTGGATCTAGTATTACTTACAATGCGGATCCGAATTCGAG |
| sequence-based reagent | ORP4\_FRAG\_1\_XHOI(gBlock) | This paper | TNG-8 | GAGGGTCCGGACTCAGATCTCGAGCTCAAGCTTCGATGGGTAAAGCAGCAGCTCCAAGTCGAGGAGGAGGATGTGGAGGTCGCTCCCGCGGGCTCTCGTCGCTGTTCACGGTTGTCCCCTGCCTGTCGTGTCATACAGCAGCACCAGGAATGAGTGCTTCAACATCAGGATCAGGACCAGAACCAAAACCACAACCACAACCAGTGCCCGAACCGGAGCGGGGACCGCTGTCAGAACAGGTGTCGGAGGCAGTTTCGGAGGCAGTGCCAAGATCGGAACCTGTGTCCGAGACGACGTCTGAGCCGGAGCCAGGGGCTGGGCAGCCATCGGAACTGCTGCAGGGGTCGCGGCCGGGGTCAGAGTCAAGCTCAGGTGTAGGGGCTGGGCCCTTCACTAAGGCCGCATCGGAGCCGCTCTCCCGGGCGGTGGGGAGCGCGACCTTTCTCAGACCCGAGTCAGGATCGCTGCCAGCGTTAAAGCCCCTGCCTCTTCTGCGACCAGGACAGGCGAAGACTCCTCTTGGGGTTCCAATGTCGGGGACTGGCACGACCTCCAGTGCCCCACTGGCCTTACTGCCTCTGGACAGCTTCGAGGGCTGGCTTCTCAAGTGGACCAACTATCTGAAGGGCTACCAGCGCCGCTGGTTCGTGCTGGGCAATGGTTTGCTCTCTTACTACAGAAATCAGGGTGAAATGGCCCACACGTGCCGTGGAACCATCAACCTGTCCACCGCGCACATTGACACGGAGGACTCTTGTGGTATCTTGCTGACCAGTGGGGCCAGGAGCTACCACCTCAAGGCCAGCTCAGAGGTGGACCGGCAGCAGTGGATCACCGCCCTGGAGCTGGCCAAGGCCAAGGCTGTCCGCGTGATGAACACTCATTCAGATGACTCTGGGGACGACGACGAGGCTACCACCCCAGCCGACAAGAGCGAGCTGCACCACACCCTGAAGAATCTTTCCCTGAAGTTAGATGACCTCAGCACGTGCAATGACCTCATCGCCAAGCACGGCGCCGCACTCCAGCGCTCCCTGACAGAGCTGGACGGCCTCAAGATCCCATCTGAGAGTGGGGAGAAGCTGAAGGTGGTGAATGAGCGGGCCACCCTCTTCCGCATCACATCCAATGCTATGATCAACGCCTGCAGGGACTTCTTGGAACTAGCAGAGATACACAGTCGGAAATGGCAGCGGGCACTGCAGTATGAGCAGGAGCAGCGCGTGCACTTGGAGGAAACCATTGAGCAGCTGGCGAAGCAGCACAACAGCCTCGAGCGGGCCTTCCACAGTGCCCCTGGCCGGCCGGCCAACCCCTCCAAGAGCTTCATTGAGGGAAGCCTCTTGACTCCCAAAGGAGAGGACAGTGAGGAAGATGAAGATACCGAGTACTTTGATGCCATGGAAGACTCC |
| sequence-based reagent | ORP4\_FRAG\_2\_BAMHI(gBlock) | This paper | TNG-9 | TGATGCCATGGAAGACTCCACATCCTTCATCACCGTGATCACCGAGGCCAAGGAAGACAGAAAAGCTGAAGGTAGCACCGGGACAAGTTCCGTGGACTGGAGCTCAGCAGACAATGTACTAGATGGTGCCTCGCTCGTGCCCAAGGGTTCATCCAAAGTCAAGAGGCGAGTCCGCATTCCCAACAAGCCCAACTACAGCCTTAACCTCTGGAGCATCATGAAGAACTGCATCGGCCGGGAGCTCTCCAGGATCCCCATGCCGGTGAACTTCAATGAGCCCCTGTCCATGCTCCAGCGGCTGACAGAGGACCTGGAGTACCACCACCTGCTGGACAAGGCAGTGCACTGCACCAGCTCAGTGGAGCAGATGTGCCTGGTGGCCGCCTTCTCTGTGTCCTCCTACTCCACCACAGTGCACCGCATCGCCAAGCCCTTCAACCCCATGCTGGGGGAGACCTTCGAGCTGGACCGCCTCGACGACATGGGCCTGCGCTCCCTCTGTGAGCAGGTGAGCCACCACCCCCCCTCAGCTGCGCACTACGTGTTCTCCAAGCATGGCTGGAGCCTCTGGCAGGAGATCACCATCTCCAGCAAGTTCCGGGGAAAATACATCTCCATCATGCCGCTAGGTGCCATCCACTTAGAATTCCAGGCCAGTGGGAATCACTACGTGTGGAGGAAGAGCACCTCAACTGTTCACAACATCATCGTGGGCAAGCTCTGGATCGACCAGTCAGGGGACATCGAGATTGTGAACCATAAGACCAATGACCGGTGCCAGCTGAAGTTCCTGCCCTACAGCTACTTCTCCAAAGAGGCAGCCCGGAAGGTGACAGGAGTGGTGAGTGACAGCCAGGGCAAGGCCCATTACGTGCTGTCCGGCTCGTGGGATGAACAAATGGAGTGCTCCAAGGTCATGCATAGCAGTCCCAGCAGCCCCAGCTCTGACGGGAAGCAGAAGACAGTGTACCAGACCCTGTCAGCCAAGCTGCTGTGGAAGAAGTACCCGCTGCCGGAGAACGCGGAGAACATGTACTACTTCTCAGAGCTGGCCCTGACCCTCAACGAGCACGAGGAGGGCGTAGCGCCAACCGACAGCCGCCTGCGGCCCGACCAGCGGCTGATGGAGAAGGGCCGTTGGGACGAGGCCAATACCGAGAAGCAGCGGCTGGAGGAGAAGCAGCGCCTGTCGCGGCGCCGGCGGCTGGAGGCCTGCGGGCCGGGCAGCAGCTGCAGCTCGGAGGAAGAGAAGGAGGCGGATGCCTATACACCATTATGGTTTGAAAAAAGATTAGATCCTTTAACAGGAGAAATGGCTTGTGTATATAAAGGAGGTTATTGGGAGGCCAAGGAGAAGCAAGACTGGCATATGTGCCCCAACATCTTCTGAGGTACCGCGGGCCCGGGATCCACCG |
| sequence-based reagent | XHOI\_STARD4\_KPNI(gBlock) | This paper | TNG-14 | TCCGGACTCAGATCTCGAGAAATGGAAGGCCTGTCTGATGTTGCTTCTTTTGCAACTAAACTTAAAAACACTCTCATCCAGTACCATAGCATTGAAGAAGATAAGTGGCGAGTTGCTAAGAAAACGAAAGATGTAACTGTTTGGAGAAAACCCTCAGAAGAATTTAATGGATATCTCTACAAAGCCCAAGGTGTTATAGATGACCTTGTCTATAGTATAATAGACCATATACGCCCAGGGCCTTGTCGTTTGGATTGGGACAGCTTGATGACTTCTTTGGATATTCTGGAGAACTTTGAAGAGAATTGCTGTGTGATGCGTTACACTACTGCTGGTCAGCTTTGGAATATAATTTCCCCAAGAGAATTTGTTGATTTCTCCTATACTGTGGGCTATAAAGAAGGGCTTTTATCTTGTGGTAATAATCTCAACATGTTATGCTTTTTTTCAGTATGGTTTAAATATTTGTGTTTTCTTGGCTGGATGTCTCTTTCCTTGTGAGGTACCGCGGGCCCGGGATCCACC |