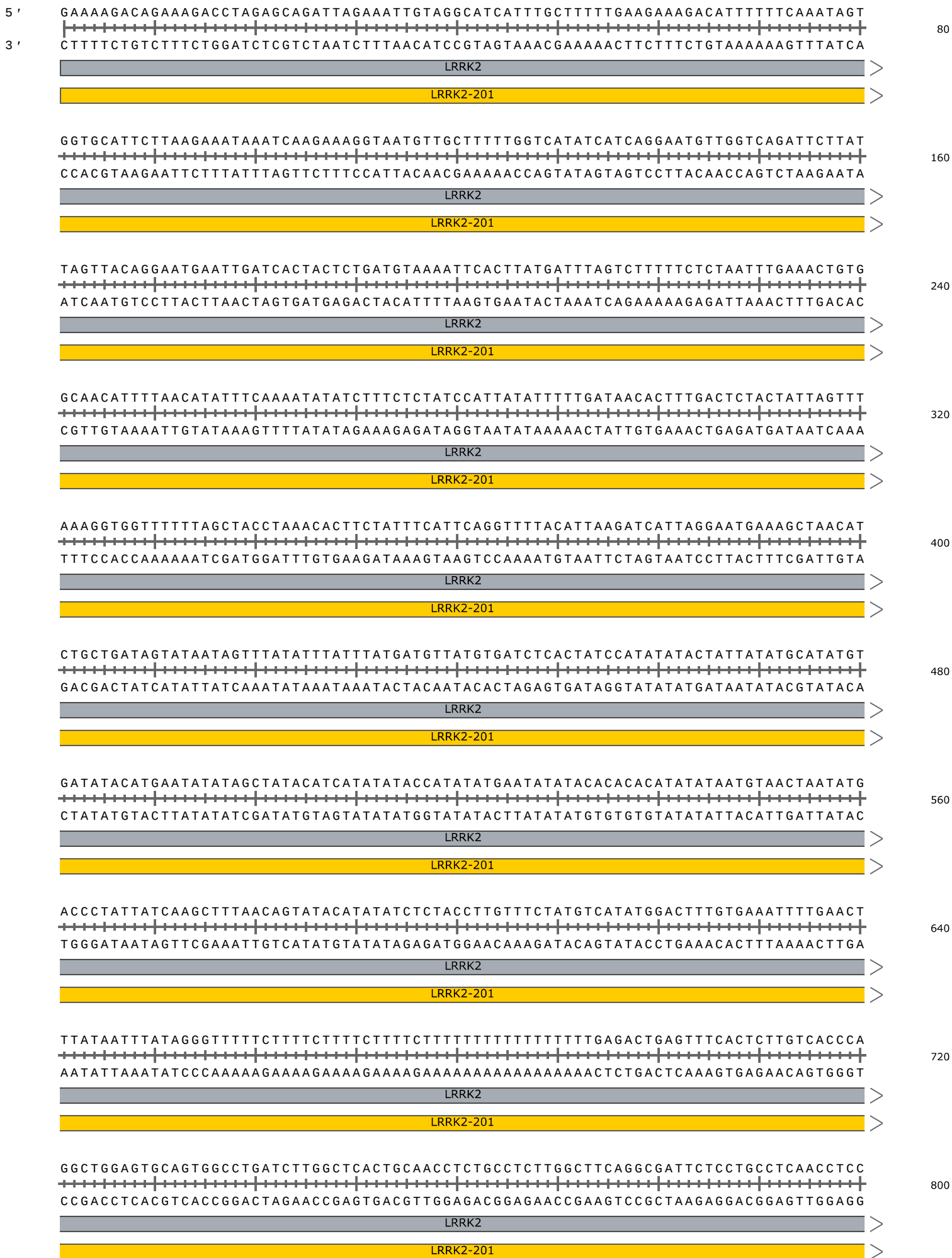


ASK2J00168_LRRK2_R1441C_E04_BB
7436 bp



CAAGTAGCTGGAATTACAGGCACCTGCCACTGTTCCCGGCTACTTTTTGGATTTTTAATAGAGACGGGGTTTCACTATAT
GTTTCATCGACCTTAATGTCCGTGGACGGTGACAAGGGCCGATGAAAAACCTAAAAATTATCTCTGCCCCAAAGTGATATA

880

LRRK2

LRRK2-201

TGGCCAGGCTGGTCTCAAACCTCCTGACCTCATGATCCGCCACCTCGGCCTCCCAAATGCAGGGATTACAGGTGCGAGC
ACCGGTCCGACCAGAGTTTGAGGACTGGAGTACTAGGCGGGTGGAGCCGGAGGGTTTTACGTCCCTAATGTCCACGCTCG

960

LRRK2

LRRK2-201

CACCGCACCTGGCGTATAATTTGTAGGGTTTTTCATACTATTTAAAGACATTAGAATATGTATACATGTATGTATATGTG
GTGGCGTGGACCGCATATTAACATCCCAAAAAGTATGATAAATTTCTGTAATCTTATACATATGTACATACATATACAC

1040

LRRK2

LRRK2-201

TGTATATATAGAGGTATATATATATTGCATATCGTATTCTAATTAGTATTGCAAACATATTTTTGGCCTTTTGATTATTTT
ACATATATATCTCCATATATATAACGTATAGCATAAGATTAATCATAACGTTTGTATAAAACCGGAAAACCTAATAAAG

1120

LRRK2

LRRK2-201

TGGTGATAGTGAACATGTTTTCTTTGGTGATTTTACCAAACATTATCAACTACCCTAAAATCTCTAGCAAAATATATGC
ACCACTATCACATTGTACAAAAGAAACCACTAAAATGGTTTTGTAATAGTTGATGGGATTTTAGAGATCGTTTTATATACG

1200

LRRK2

LRRK2-201

ATTAACAGTACTCTGAAAGACATGTACATTATTAGTTATATGAGATATGCACTCTTCTGGATACTATATTTTGAATAGT
TAATTGTCATGAGACTTTCTGTACATGTAATAATCAATATACTCTATACGTGAGAAGACCTATGATATAAAATCTTATCA

1280

LRRK2

LRRK2-201

GTGACATGTAAAAGAACTCACCTAAATCTCAAGTATACTTTAAGCAGTTTATTATTTTATTTTTATCTTTCAAATACTA
CACTGTACATTTTCTTGAGTGGATTTAGAGTTCATATGAAAATTCGTCAAATAATAAAATAAAATAGAAAGTTTATGAT

1360

LRRK2

LRRK2-201

GGTTTCTTCAACAGCGATTAAAAAGGCTGTGCCTTATAACCGAATGAAACTTATGATTGTGGGAAATACTGGGAGTGGT
CCAAAGAAGTTGTCGCTAATTTTTTCCGACACGGAATATTGGCTTACTTTGAATACTAACACCCTTTATGACCCTCACCA

1440

LRRK2

LRRK2-201

F L Q Q 1325 R L K K A V P Y N R 1330 M K L M I 1340 V G N T G 1345 S G
ENSE00003496760
LRRK2-201

AAAACACCTTATTGCAGCAATTAATGAAAACCAAGAAATCAGATCTTGGAAATGCAAAGTGCCACAGTTGGCATAGATGT
TTTTGGTGGAAATAACGTCGTTAATTACTTTTTGGTTCTTTAGTCTAGAACCTTACGTTTCACGGTGTCAACCGTATCTACA

1520

LRRK2

LRRK2-201

K T T L L Q Q L M K T K K S D L G M Q S A T V G I D V

ENSE00003496760

LRRK2-201

GAAAGACTGGCCTATCCAAATAAGAGACAAAAGAAAGAGAGATCTCGTCCTAAATGTGTGGGATTTTGCAGGTATTTCTT
CTTTCTGACCGGATAGGTTTATTCTCTGTTTTCTTTCTCTCTAGAGCAGGATTTACACACCCCTAAAACGTCCATAAAGAA

1600

LRRK2

LRRK2-201

K D W P I Q I R D K R K R D L V L N V W D F A

ENSE00003496760

LRRK2-201

TCTATAGAATTTTAAAATTCACTTTTACCATTTGTTTTGGAACAGGGATTCAAAAACCTGAGCTTTCTGTTCTAATATCCAG
AGATATCTTAAAATTTTAAGTGAAAATGGTAAACAAACCTTGTCCCTAAGTTTTTGACTCGAAAAGACAAGATTATAGGTC

1680

LRRK2

LRRK2-201

LRRK2-201

AAACCTGGTAGACTGTATGGAATTATTCCAAAGCCCTTCATTTCTCCTAATTTTACCCTTGCCCTCCAGAATGGAGAAGAA
TTTGGACCATCTGACATACCTTAATAAGGTTTCGGGAAGTAAAGAGGATTTAAAATGGGAACGGAGGTCTTACCTCTTCTT

1760

LRRK2

LRRK2-201

LRRK2-201

CATGGAGGGATATGTTAGGAACAATTTGGTGCTAGGTACTTTGATCGGTTGCTGACAAATATGCTAAAAGTGGTCAATCC
GTACCTCCCTATACAATCCTTGTTAAACCACGATCCATGAAACTAGCCAACGACTGTTTATACGATTTTACCAGTTAGG

1840

LRRK2

LRRK2-201

LRRK2-201

TAGTAAAAACCCAGAATAGTTCTCTAAACATGGTCTGTTGTTTTCTCTTATTAGTATGCTAAATAATAAATAGTATTAT
ATCATTTTTGGGTCTTATCAAGAGATTTGTACCAGACAACAAAAGAGAATAATCATACGATTTATTATTTATCATAATA

1920

LRRK2

LRRK2-201

LRRK2-201

TCTCCAGATTTTTTTTTTAAAAAAGGATTCTTGCCTGTCGTTTGAAGATTAAAAAATTTGTCTCTAATCTTTATTTAG
AGAGGGTCTAAAAAAAATTTTTTCTTAAGAACGGACAGCAAACCTTCTAATTTTTTTTAAACAGAGATTAGAAATAAATC

2000

LRRK2

LRRK2-201

LRRK2-201

GTCGTGAGGAATTCTATAGTACTCATCCCCATTTTATGACGCAGCGAGCATTGTACCTTGCTGTCTATGACCTCAGCAAG
CAGCACTCCTTAAGATATCATGAGTAGGGGTAAAATACTGCGTCGCTCGTAACATGGAACGACAGATACTGGAGTCGTTT

2080

LRRK2

LRRK2-201

G R E E F Y S T H P H M T Q R A L Y L A V Y D L S K

ENSE00003509533

LRRK2-201

GGACAGGCTGAAGTTGATGCCATGAAGCCTTGGCTCTTCAATATAAAGGTGATTTGTTCTGATCATTGAAAAATAGAAAA
CCTGTCCGACTTCAACTACGGTACTTCGGAACCGAGAAGTTATATTTCCACTAAACAAGACTAGTAAACTTTTATCTTTT

2160

LRRK2

LRRK2-201

G Q A E V D A M K P W L F N I K

ENSE00003509533

LRRK2-201

TAATTCATGTGTCTGTGTGCGTGTGTGTGTGTGTGTGTGTAAGTTAATTTATTTTGGGCAAACAATTGCTTCAGTCTCTTTA
ATTAAGTACACAGACACACGCACACACACACACACACATTCAATTAATAAAAACCCGTTTGTAAACGAAGTCAGAGAAAT

2240

LRRK2

LRRK2-201

LRRK2-201

AATACTTTCTTAAAAGAAGCACTAAAATTTTGAATTGGGAAACTTTCCGAGTAATGAAGTCATAACATGAAAATTGTATG
TTATGAAAGAATTTTCTTCGTGATTTTAAAACCTTAACCTTTGAAAGGCTCATTACTTCAGTATTGTACTTTTAAACATAC

2320

LRRK2

LRRK2-201

LRRK2-201

TTCCATGTTGGTGAATGTTATTGGTAACCTGAAACTCTTTTATGCTGTAAAACCTTGAAAATATATATGTTCAACTGTTTT
AAGGTACAACCACTTACAATAACCATTGGACTTTGAGAAAATACGACATTTTGAACCTTTTATATATACAAGTTGACAAAA

2400

LRRK2

LRRK2-201

LRRK2-201

TTAATTATATTATTTCTTAAATGAAATCTAAATTTTCTAATTTAAAATAAGCTATATTAAAGAAAAGCAATCTATATAT
AATTAATATAATAAAGAATTTACTTTAGATTTAAAAAGATTAATTTTATTCGATATAATTTCTTTTCGTTAGATATATA

2480

LRRK2

LRRK2-201

LRRK2-201

ATATATCTCATCAACTTTGTAICTCAGGGGCCATTTAGTGTGAAATTCTTCAGATTGTATCCTTTAAGTGGTCCCAGATTA
TATATAGAGTAGTTGAAACATGAGTCCCGGTAAATCACACTTTAAGAAGTCTAACATAGGAAATTCACCAGGGTCTAAT

2560

LRRK2

LRRK2-201

LRRK2-201

TTATGCTGTTACATCTGGAATCTCCCTTTTGTGCTTTTCTATCTTTTCCTTTGTTGTCTTGTGTCAGCTATTCCTTCA
AATACGACAATGTAGACCTTAGAGGGAAAAACAACGAAAAGATAGAAAAGGAAAAACAACAGAACAACAGTCGATAAGGAAGT

2640

LRRK2

LRRK2-201

LRRK2-201

AACACTATGGCTTTTTAGAAATGGAGACTAAACTGCTGCTTGCATGATGCTGCAATGAACTCTTCTGTGCATAAAGTCCTT
TTGTGATACCGAAAAATCTTACCTCTGATTTGACGACGAACGTACTIONGACGTTACTTGAGAAGACACGTATTTTCAGGAA

2720

LRRK2

LRRK2-201

LRRK2-201

AAAAAGCTTGTGTCAGGACATTTAACCATGTAATTGGCTGCATACATGCTTGTGTTTTGTAATTTGGGTATTTTTTAATGTT
TTTTTCGAACACAGTCCTGTAAATTGGTACATTAACCGACGTATGTACGAACAAAACATTAACCCATAAAAAATTACAA

2800

LRRK2

LRRK2-201

LRRK2-201

PCR Forward

ATAGTACAGTGGCAGTCATATTTGC

TCTTTTATTAACCTTTTTTACAGCTAGCCAACGTGAGCAAATAGTACAGTGGCAGTCATATTTGCTTGAGTGGCTTTTTATT
AGAAAATAATTGAAAAAATGTCGATCGGTTGCACTCGTTTATCATGTACCCGTCAGTATAAACGAACTCACCGAAAAATAA

2880

LRRK2

LRRK2-201

LRRK2-201

CTTTCATTGTAGACTCCAAATTGGTTGACTTTAAAACGAATTTAGAAGATTAATTCACAGATAAGGAAGAGAAAAATATA
GAAAGTAACATCTGAGGTTTAAACCAACTGAAATTTGCTTAAATCTTCTAATTTAAGTGTCTATTCTTCTCTTTTATAT

2960

LRRK2

LRRK2-201

LRRK2-201

AACTATATGACGTTAATTTGATATAATTTGTGGGTTTATGAAATGCTTATTTTATTTAGGAGTGAATAACTCATCTTAAG
TTGATATACTGCAATTAACCTATATTAACACCCAAATACTTTACGAATAAAAATAAATCCTCACTTATTGAGTAGAATTC

3040

LRRK2

LRRK2-201

LRRK2-201

GCATGAAGATGGGAAAGGAAAACTATACCACTACCGTTATATATGCCACCTAAAAGGGTGAAGAATTGGGTTAAGAAAGG
CGTACTTCTACCCTTTCTTTTGGATATGGTGATGGCAATATATACGGTGGATTTTCCCACTTCTTAACCCAATTCTTTCC

3120

LRRK2

LRRK2-201

LRRK2-201

CCAAAAATGACTTTTTAAAAATGTCGTAAGGTTACATTTTTTTCTTAGGTTTAAGGAAAAAAGGACAGTTGTTCTTTTTCTT
GGTTTTTACTGAAAAATTTTACAGCATTCCAATGTAAAAAAGAATCCAATTCCTTTTTCTGTCAACAAGAAAAAGAA

3200

LRRK2

LRRK2-201

LRRK2-201

Donor Sequence WT -> SNV

CAACAGGAATGTGAGCAGGCC

CTTCTGAAGTCTGCTAGTTTCTCTTTTTCCATTCAAGTGAATGTCACGGAAAGCAAATATCAACAGGAATGTGAGCAGGCC
GAAGACTTCAGACGATCAAAGAGAAAAAGGTAAGTTCACCTACAGTGCCTTTCGTTTATAGTTGTCCTTACACTCGTCCGG

3280

LRRK2

LRRK2-201

LRRK2-201

Donor Sequence WT -> SNV

Donor Sequence WT -> SNV

CAGTTTGAAAGCAAACACAAGAGGGTTTTGTGTCCTTCCCTCCAGGCTTGC GCGCTTCTTCTTCCCTGTGATTCTCGTTG
CAGTTTGAAAGCAAACACAAGAGGGTTTTGTGTCCTTCCCTCCAGGCTC GCGCTTCTTCTTCCCTGTGATTCTCGTTGG
GTCAAACTTTCGTTTGTGTTCTCCCAAAACACAGAAAGGGAGGTCCGAGCGCGAAGAAGAAGGGGACACTAAGAGCAACC

3360

LRRK2

LRRK2-201

LRRK2-201

1440 A R A S S S P V I L V G
ENSE00003508420

Donor Sequence WT -> SNV

gRNA Protospacer

PAM

SNV

GGTCCGAGCGCGAAGAAGAA

gRNA Protospacer

CACACATTTGGATGTTTTCTGATGAGAAGCAACGCAAAGCCTGCATGAGTAAAAATCACCAAGGAACTCCTGAATAAGCGAG
GTGTGTAACCTACAAAGACTACTCTTCGTTGCGTTTTCGGACGTACTCATTTTTAGTGTTTCTTGAGGACTTATTCGCTC

3440

LRRK2

LRRK2-201

LRRK2-201

1455 1460 1465 1470 1475
T H L D V S D E K Q R K A C M S K I T K E L L N K R
ENSE00003508420

GGTTCCTGCCATACGAGATTACCACTTTGTGAATGCCACCGAGGAATCTGATGCTTTGGCAAACTTCGGAAAACCATC
CCAAGGGACGGTATGCTCTAATGGTGAAACACTTACGGTGGCTCCTTAGACTACGAAACCGTTTTGAAGCCTTTTGGTAG

3520

LRRK2

LRRK2-201

LRRK2-201

1480 1485 1490 1495 1500
G F P A I R D Y H F V N A T E E S D A L A K L R K T I
ENSE00003508420

CTTACGGTGGCTCCTTAGAC

Sanger Sequencing Primer

ATAAACGAGAGCCTTAATTTCAAGGTAACATGGTAGGCTGGTAGAGAAATGTAATTTATTGATTCTCAACTGCCTAGAAA
TATTTGCTCTCGGAATTAAGTTCCATTGTACCATCCGACCATCTCTTTACATTAATAACTAAGAGTTGACGGATCTTT

3600

LRRK2

LRRK2-201

1505 1510
I N E S L N F K
ENSE00003508420

LRRK2-201

TGTCAGAAATTTTGAGAAGTGAGCAACTCACTTAAATTTGTGGGTTTTCTTTCCTTGTTGCTGTTAGCATTATTAAGTC
ACAGTCTTTAAACTCTTCACTCGTTGAGTGAATTTTAACACCCAAAAGAAAGGAACAACGACAATCGTAATAATTTTCAG

3680

LRRK2

LRRK2-201

LRRK2-201

CTTTCATTTTAAATTTATTTATGCCAGACTTCATTTCTAATTCATAGAAATGGGAACAAAAATAATTAGAGGAACCTG
GAAAGGTAAATTTAATAAATACGGTCTGAAGTAAAGATTAAGTATCTTTACCCCTTGTTTTTTATTAATCTCCTTGGAC

3760

LRRK2

LRRK2-201

LRRK2-201

AGAGAACTAAGAGACCGTTTCTGGGATACTGAGAAAATGTTTCTGAGAGAGAATCTGAGAAAATGTTTTTGATGCCTTT
TCTCTTTGATTCTCTGGCAAAGACCCTATGACTCTTTTACAAAGACTCTCTCTTAGACTCTTTTACAAAACTACGGAAA

3840

LRRK2

LRRK2-201

LRRK2-201

TCTGATTCAACTTCTTATAGTGGTGATTCAATCACAAAGGGTAAAGGTGAATACTGAGGTCTTGGGATCATCTTTCTTCTA
AGACTAAGTTGAAGAATATCACCCTAAGTTAGTGTCCATTTCCACTTATGACTCCAGAACCCTAGTAGAAAGAAGAT

3920

LRRK2

LRRK2-201

LRRK2-201

CTCCAGAACCCTAGTAGAAAGAAGA
PCR Reverse

TTATTCTTTAACTGTTATTTTTCCATTTCTCTTTTCTTTTGGAAATTCCTGTTTTATGGACATCTTGATCTTTTGTGCCA
AATAAGAAATTTGACAATAAAAAGGTAAAGGAGAAAAGAAAACCTTAAGGACAAAATACCTGTAGAAGTAAAGAACACGGT

4000

LRRK2

LRRK2-201

LRRK2-201

CTCATTCATGAATTTTGTCACTGTGATTCCCATTTCCAATTTTTTCCCTCCGTATTGTGAGGCAGCTGTTTTATTTAGTC
GAGTAAGTACTTAAAACAGTGACACTAAGGGTAAGGTTAAAAAAGGGAGGCATAACACTCCGTCGACAAAAATAAATCAG

4080

LRRK2

LRRK2-201

LRRK2-201

ATGAAGACCACTAACTTGGTTTTTCAGCAGTGTCTCACTAATTACTTAGTTTCATACAAAATGGGCTTTTTATTTTAGGAAT
TACTTCTGGTGATTGAACCAAAAAGTCGTACAGAGTGATTAATGAATCAAGTATGTTTTACCCGAAAAATAAAATCCTTA

4160

LRRK2

LRRK2-201

LRRK2-201

TATGTTTTAAATGTTTAAAGTTATCTTCTCGTAAGCCAAATTTTTATAAAATGTAAATAAATCAGTTATCAGAGAGAACA
ATACAAAATTTACAAATTTCAATAGAAGAGCATTTCGGTTTAAAAATATTTTACATTTATTTAGTCAATAGTCTCTCTTGT

4240

LRRK2

LRRK2-201

LRRK2-201

CTTTTTTTTTTAAATACTTGGCAGAAAAAAGAAATCTTCACTGGGTACTACAGGGAGTGTGGTGTAAACTGTACTGAAAA
GAAAAAATAATTTATGAACCGTCTTTTTTCTTTAGAAGTGACCCATGATGTCCCTCACACCACATTTGACATGACTTTT

4320

LRRK2

LRRK2-201

LRRK2-201

ATACCCTTGATAGTTCCATATGACAAACATAATGATGAATTTCACTTAGTCTGTCTTGGCTTAGCTCAATAGCACTAATG
TATGGGAACATCAAGGTATACTGTTTGTATTACTACTTAAAGTGAATCAGACAGAACCGAATCGAGTTATCGTGATTAC

4400

LRRK2

LRRK2-201

LRRK2-201

ATCAAGATACTGGCTGATAAATAGAGTCCTATTTGGCCTGGGCAGTCCCAGCATAATTATGTAATAGTGCCCACTATAT
TAGTTCTATGACCGACTATTTATCTCAGGATAAACCGGACCCGTCAGGGTTCGTATTAATACATTATCACAGGGTGATATA

4480

LRRK2

LRRK2-201

LRRK2-201

TCTCAAAGCATTCCAATTTGGATGATAAATTATATAGTCACCTTGGTTATAACTCCATGCTGGCCAGTTAGCTTAGTTTC
AGAGTTTTTCGTAAGGTTAAACCTACTATTTAATATATCAGTGGAACCAATATTGAGGTACGACCGGTCAATCGAATCAAG

4560

LRRK2

LRRK2-201

LRRK2-201

TGTTCCATTTATATAGATTATGTGTGCTTCACTCCAAAACCTAATGAGCCATTTGTAAAAGTGATGGCTTTTGCGGTGCC
ACAAGGTAAATATATCTAATACACACGAAGTGAGGTTTTGGATTACTCGGTAAACATTTTCACTACCGAAAAACGCCACGG

4640

LRRK2

LRRK2-201

LRRK2-201

CAGGGAGAGAATTTGTATGTTTGTATCCTTCAACACACATTTATTACAGTTATTTAAAAGGTTTTATTGATGATAGATGGT
GTCCCTCTCTTAAACATACAAACATAGGAAGTTGTGTGTAATAATGTCAATAATTTTCCAAAATAACTACTATCTACCA

4720

LRRK2

LRRK2-201

LRRK2-201

AATGTCATGTAAAAATGACATATTATTTATTTGTAGACTTTTCTATTCTCTTGTGGACATGTAATTAGAACTAATATG
TTACAGTACATTTTACTGTATAATAAATAAACATCTGAAAGGATAAGAGAACAACCTGTACATTAATCTTTGATTATAC

4800

LRRK2

LRRK2-201

LRRK2-201

ACTTAAAGAAAAACAATACACAAAATTTATTCATCCAATTAATCTCTTAATCCAGGTGTTTTTTTTTCTGAGACTATA
TGAATTTCTTTTTGTTTATGTGTTTTAAATAAGTAGGTTAATTAGAGAATTAGGTCCACAAAAAAAAGACTCTGATAT

4880

LRRK2

LRRK2-201

LRRK2-201

CCCATACTTCAATAACTTTGTTGTTACTGAGAATATTTTGGAGTTTCCCTTTTTGTCATTGTTGTCAGAGAATGTATCATA
GGGTATGAAGTTATTGAAACAACAATGACTCTTATAAACTCAAAGGGAAAAACAGTAACAACAGTCTCTTACATAGTAT

4960

LRRK2

LRRK2-201

LRRK2-201

TCTTTAAAAGACTTGTGGAGGATGAGTTTGTGTTTTGAAAAGGCCTGAATTTAGTTGATGCAAAGTCACAGATAAGATGG
AGAAAATTTTCTGAACAACCTCCTACTCAAACAAAATTTTCCGGACTTAAATCAACTACGTTTCAGTGTCTATTCTACC

5040

LRRK2

LRRK2-201

LRRK2-201

TTCATTAAGCTGTATTAATACTGCTTTTGTCTAATAGATATCATTACCAATAAGTCAGACTAGTTTTTCTTTTGGCACTT
AAGTAATTCGACATAATTATGACGAAAACAGATTATCTATAGTAATGGTTATTTCAGTCTGATCAAAAAGAAAACCGTGAA

5120

LRRK2

LRRK2-201

LRRK2-201

ATAAATCACCTTTGAAGACAACCTTTTACAAGGAAATAAAACAAATGCTTTGAGAAATACCAGTATTATTGAAAGAAAAG
TATTTAGTGGAACCTTCTGTTGAAAAATGTTCTTTATTTTGTGTTACGAAACTCTTATGGTCATAATAACTTTCTTTTC

5200

LRRK2

LRRK2-201

LRRK2-201

TATATATTGCTAATGGATGCAGCATTCTGGCATAATGGTTTTGAAAACCTCATTTGATTGCTTTGTAGAAGAATGACTCTTT
ATATATAACGATTACCTACGTCGTAAGACCGTATTACCAAACCTTTTGAGTAAACTAACGAAACATCTTCTTACTGAGAAA

5280

LRRK2

LRRK2-201

LRRK2-201

CAGATGACCCAGGGCCTGTGAGCCTGCCAGAACTTGAAAATTCTTTCTTCCCTGAGGTGCTTCAACCTGAATTCAAAGAG
GTCTACTGGGTCCCGGACACTCGGACGGTCTTGAACCTTTAAGAAAGAAGGGACTCCACGAAGTTGGACTTAAGTTTCTC

5360

LRRK2

LRRK2-201

LRRK2-201

CAGCTTTTAATCTATTAGAGATCATTTTTTGTCCCTCTCATTTATTTTTTCATATTTGCCTTTGATCTTAGCTCTTCTCTAA
GTCGAAAATTAGATAATCTCTAGTAAAAAACAGGAGAGTAAATAAAAAGTATAAACGGAAACTAGAATCGAGAAGAGATT

5440

LRRK2

LRRK2-201

LRRK2-201

TCTTTTTCTGTCTCAACCTTATTAACAGGTGTCTGTGCAGACACTTTTAAGTTTTGTTTTTTGGCTCAGCCTGTCAGTTA
AGAAAAAGACAGAGTTGGAATAATTGTCCACAGACACGTCTGTGAAAATTCAAAACAAAAAACCGAGTCGGACAGTCAAT

5520

LRRK2

LRRK2-201

LRRK2-201

ACTGATAATCATGCTGAAAAGGAGAAGCAGGACAAAAACAGAGTTCAATGCTGACAATACTCCTTTTAATCTTGTCCAGCCC
TGACTATTAGTACGACTTTCTCTTCGTCCTGTTTTGTCTCAAGTTACGACTGTTATGAGGAAAATTAGAACAGGTCGGG

5600

LRRK2

LRRK2-201

LRRK2-201

ATTAGCAGAGCAGGCATCTCTGTGGGCCTTGAGACGTAGTCCCGTAAAACCTCATCCCGTTTTCTACTTGATTTGCTTTCTT
TAATCGTCTCGTCCGTAGAGACACCCGGAACCTCTGCATCAGGGCATTGAGTAGGGCAAAGATGAACTAAACGAAAGAA

5680

LRRK2

LRRK2-201

LRRK2-201

TGAGA ACTCTTGTTTTATTTTTATATGGAGGTTTTCTGCCTTGGATTAAACATAAACCTCAATCTGAAGTTCAATTTTCAT
ACTCTTGAGAACAAAATAAAAATATACCTCCAAAGGACGGAACCTAATTTTGTATTTGGAGTTAGACTTCAAGTTAAAGTA

5760

LRRK2

LRRK2-201

LRRK2-201

CTTAATTTATGAACGACTAAGAGAGGGGAACATGAAAAGTGGAGGTTAGTGAAAATTATCTCTAATTCTCTGGGTAAAGAGA
GAATTAATACTTGCTGATTCTCTCCCTTGACTTTTTACCTCCAATCACTTTAATAGAGATTAAGAGACCCAATTCTCT

5840

LRRK2

LRRK2-201

LRRK2-201

TACATGAAAACAGTCTCTTGAGTAACCATTTGCAGGTAAATATGGAAGTAATGGTTATGGTTGTCTCTTTAAGTTTTTAG
ATGTACTTTTGTGAGAGAACTCATTGGTAAACGTCCATTTATACCTTCATTACCAATACCAACAGAGAAATTCAAAAATC

5920

LRRK2

LRRK2-201

LRRK2-201

TCACAAGTAGAAAAAGACCAAGTTAATTTTTCTGTGTGTGCTGAATTTCTATTTGTAGTAAGTGTAAGAATTTAAGCA
AGTGTTCATCTTTTTCTGGTTCAATTAATAAAGACACACACGACTTAAAGATAAACATCATTACATTCTTAAATTCGT

6000

LRRK2

LRRK2-201

LRRK2-201

GAAATTCTGATTCGTATTTTCAGATAAAAAGAATATGTAATTTCCATAGGTCCAGAAATAGGGAGAGTTTGCCATCTGGT
CTTTAAGACTAAGCATAAAAGTCTATTTTTCTTATACATTAAAGGTATCCAGGTCTTTATCCCTCTCAAACGGTAGACCA

6080

LRRK2

LRRK2-201

LRRK2-201

GGTTCTTAACGGCACTCTGGATATTATTAAGAGTTGCATTTCTATTTAAAATTATATTTAAAAAACGTTTGGGAAGATAC
CCAAGAATTGCCGTGAGACCTATAATAATTCTCAACGTAAAGATAAATTTAATATAAAAATTTTTGCAAACCTTCTATG

6160

LRRK2

LRRK2-201

LRRK2-201

TTTTATTGTAGAAACTATCCTCTTAGGGCCATTCTTTAAAAAATCTTATTTTATATTTTCTCATTGTTGATAGTGA
AAAATAACATCTTTGATAGGAGAATCCCGGTAAGAAATTTTTTAGAATAAATATATAAAGAGTAAAAACAATCTCACT

6240

LRRK2

LRRK2-201

LRRK2-201

TTAGATTCTAAGAGCAACAGAACAATGATCATCCTCTCCTATCAGAATCACTGATGTTTAGATGATTTCTCATTTTCCCA
AATCTAAGATTCTCGTTGTCTTGTACTAGTAGGAGAGGATAGTCTTAGTGACTACAAATCTACTAAAGAGTAAAAGGGT

6320

LRRK2

LRRK2-201

LRRK2-201

AGTTCAAGGTTCCATGAAAAACATAGCTTGAGTGGGATTTTATGTCTCTGCGTTTTCACTGTTGATATATATGTCCTCCCA
TCAAGTTCCAAGGTACTTTTTGTATCGAACTCACCCATAAAATACAGAGACGCAAAGTGACAACATATATACAGGAGGGT

6400

LRRK2

LRRK2-201

LRRK2-201

ATATAACATTTTACAAATAACCAAGCACAAAATTTAATATTTTACCTTGAATATTTAAAATATAATAATATCCAAAAGCT
TATATTGTA AAAATGTTTATTGGTTCGTGTTTTAAATTATAAAAATGGAACCTATAAAATTTTATATTATTATAGGTTTTTCGA

6480

LRRK2

LRRK2-201

LRRK2-201

CTTGTAATTTGTA CTGATATCTTATACTAGCGTGTCTGTTTTACATTAAGTTTTAATGTCTTAGGATATAAAAAATCTTTT
GAACATTA AACATGACTATAGAATATGATCGCACAGACAAAGTGTAATTC AAATTACAGAATCCTATATTTTTTTAGAAAA

6560

LRRK2

LRRK2-201

LRRK2-201

TTATGGTTAGTGATTTATCTTGTTTTTTTTTCCATGGAAATTTCTGGATAGCGGAGATAAAATATTTCCATACTATTTTTATTT
AATACCAATCACTAAATAGAACAAAAAAAAGGTACCTTAAAGACCTATCGCTCTATTTATAAAGGTATGATAAAATAAA

6640

LRRK2

LRRK2-201

LRRK2-201

GATATTTCCAAATTTGCCTCTGAATCAACAATTTTCTATTTTAAATTTCA TTGTA CTGTTCCCTTACAACCTAAATAGCT
CTATAAAGGTTTTAAACGGGAGACTTAGTTGTTAAAAGGATAAAATTAAGTAACATGAACAAGGAATGTTGGATTTATCGA

6720

LRRK2

LRRK2-201

LRRK2-201

TTTTATTATATTTTGATTTTATTTAAAAATGTA CTGTTCTGAATAATATATCTGTTTCTGTAAAACTGTTAGCACTGAATT
AAAATAATATAAAACTAAAATAAATTTTTACATGAAGACTTATTATATAGACAAAGACATTTTTGACAATCGTGACTTAA

6800

LRRK2

LRRK2-201

LRRK2-201

TGCCAACCATTTGACAAATACACAAATAAAATAGATTTTTACGGCTTGTCATTTGTAATTT CATAGATCCGAGATCAGCT
ACGGTTGGTAAACTGTTTATGTGTTTATTTTATCTAAAAATGCCGAACAGTAAACATTAAAGTATCTAGGCTCTAGTCGA

6880

LRRK2

LRRK2-201

LRRK2-201

1515
I R D Q L
ENSE00003622781

TGTTGTTGGACAGCTGATTCCAGACTGCTATGTAGAACTTGAAAAATCATTTTTATCGGAGCGTAAAAATGTGCCAATTG
ACAACAACCTGTCGACTAAGGTCTGACGATACATCTTGAACCTTTTTTAGTAAAATAGCCTCGCATTTTTTACACGGTTAAC

6960

LRRK2

LRRK2-201

V V G Q L I P D C Y V E L E K I I L S E R K N V P I

ENSE00003622781

LRRK2-201

AATTTCCCGTAATTGACCGGAAACGATTATTACAACCTAGTGAGAGAAAAATCAGCTGCAGTTAGATGAAAATGAGCTTCCT
TTAAAGGGCATTAACTGGCCTTTGCTAATAATGTTGATCACTCTCTTTTAGTCGACGTC AATCTACTTTTACTCGAAGGA

7040

LRRK2

LRRK2-201

E F P V I D R K R L L Q L V R E N Q L Q L D E N E L P

ENSE00003622781

LRRK2-201

CACGCAGTTCACTTTCTAAATGAATCAGGTTTGTGTTTTTCGTTCTTATTTTTCAAAGCTCAGCTGTAGTAACTTATAAA
GTGCGTCAAGTGAAAAGATTTACTTAGTCCAAACACAAAAAGCAAGGAATAAAAAGTTTCGAGTCGACATCATTGAATATTT

7120

LRRK2

LRRK2-201

H A V H F L N E S G L C F S F L I F K A Q L

ENSE00003622781

LRRK2-201

(in frame with LRRK2-201)

AGTGTCTTCTGAATCTTTTATAGAATTTACATTCAAAAGTTGAGAGAATATCCATACGGTTCTTTAATAGGCCACTGATTTT
TCACAAAAGACTTAGAAAATATCTTAAATGTAAGTTTCAACTCTCTTATAGGTATGCCAAGAAATTATCCGGTGACTAAAA

7200

LRRK2

LRRK2-201

TTTCTTTTTGGAAGATCATCATGTGTGTTTCATGACAAATCATGTATCATGTCATAAGAAAACAAATTTAGAAATCACCTA
AAAGAAAAACCTTCTAGTAGTACACACAAGTACTGTTTAGTACATAGTACAGTATTCTTTTGTAAATCTTTAGTGAT

7280

LRRK2

LRRK2-201

GGAGTAAAGCAGTGGAAGAGTCCCTGAGTGGGAGTTAAAAATTTGGGTTCTAGAACTTGTCTTTACTATTTCAGGAGCT
CCTCATTTCGTCACCTTTCTCAGGGACTCACCTCAATTTTATAAACCCAAGATCTTGAACAGAAATGATAAGTCTCTCGA

7360

LRRK2

LRRK2-201

GTGGAACCCTGAATAGTCAAATGACATTCATAATGTCAAATGAGTTTAGTGCATGTGAAAGTTATTTTTATATTGC
CACCTTGGGACTTATCAGTTTACTGTAAGTATTACAGTTTACTCAAATCACGTACACTTTCAATAAAAAATATAACG

3'















7436








5'

LRRK2

LRRK2-201

Feature	Location	Size			Type
LINC02471	1 .. 7436	7436 bp	■	→	gene
/note	= gene ENSG00000223914 lncRNA				
✓ LRRK2	1 .. 7436	7436 bp	■	→	gene
/note	= gene ENSG00000188906 Protein coding				
LINC02471-202	1 .. 7436	7436 bp	■	→	prim_transcript
/note	= primary transcript ENST00000641941 lncRNA				
✓ LRRK2-201	1 .. 7436	7436 bp	■	→	prim_transcript
/note	= primary transcript ENST00000298910				
LRRK2-204	1 .. 7436	7436 bp	■	→	prim_transcript
/note	= primary transcript ENST00000430804 Nonsense mediated decay				
LRRK2-206	1 .. 7436	7436 bp	■	→	prim_transcript
/note	= primary transcript ENST00000479187 Retained intron				
LRRK2-210	1 .. 7436	7436 bp	■	→	prim_transcript
/note	= primary transcript ENST00000679360 Nonsense mediated decay				
LRRK2-218	1 .. 7436	7436 bp	■	→	prim_transcript
/note	= primary transcript ENST00000680790				
✓ LRRK2-201	1362 .. 7068	5707 bp	■	→	CDS
▶ 4 segments = 779 bp					
/codon_start	= 1				
/note	= coding sequence ENSP00000298910				
/translation	= FLQQLKKA V PYNRMKLMIVGNTGSGKTTLLQQLMKTKKSDLGMQSATV GIDV KDWPIQ IRDKRKRDLVLNVWDFAA,,GREEFYSTHP HFMTQRALYLA VYDLSKGQAEVDAMKPWLFNIK,,ARASSPVILV GTHLDVSDEKQRKACMSKITKELLNKRGFPAIRDYHFVNATEE SDALA KLRKTIINESLNFK,,IRDQLVVGQLIPDCYVELEKIILSERKNVPIEFPVIDRKRLQLVRENQLQLDENELPHAVHFLNES 259 amino acids = 29.9 kDa				
LRRK2-218	1362 .. 7068	5707 bp	■	→	CDS
▶ 4 segments = 779 bp					
/codon_start	= 1				
/note	= coding sequence ENSP00000505335				
/translation	= FLQQLKKA V PYNRMKLMIVGNTGSGKTTLLQQLMKTKKSDLGMQSATV GIDV KDWPIQ IRDKRKRDLVLNVWDFAA,,GREEFYSTHP HFMTQRALYLA VYDLSKGQAEVDAMKPWLFNIK,,ARASSPVILV GTHLDVSDEKQRKACMSKITKELLNKRGFPAIRDYHFVNATEE SDALA KLRKTIINESLNFK,,IRDQLVVGQLIPDCYVELEKIILSERKNVPIEFPVIDRKRLQLVRENQLQLDENELPHAVHFLNES 259 amino acids = 29.9 kDa				
✓ Donor Sequence WT -> SNV	3260 .. 3359	100 bp	■	⊢	misc_feature
✓ gRNA Protospacer	3322 .. 3341	20 bp	■	⊢	misc_feature
LRRK2-220	3326 .. 7436	4111 bp	■	→	prim_transcript
/note	= primary transcript ENST00000681696				
LRRK2-220	3326 .. 7068	3743 bp	■	→	CDS
▶ 2 segments = 421 bp					
/note	= coding sequence ENSP00000505871				
/translation	= ARASSPVILV GTHLDVSDEKQRKACMSKITKELLNKRGFPAIRDYHFVNATEESDALAKLRKTIINESLNFK,,IRDQLVVGQLIPDCY VELEKIILSERKNVPIEFPVIDRKRLQLVRENQLQLDENELPHAVHFLNES 140 amino acids = 16.1 kDa				
✓ SNV	3329 .. 3329	1 bp	■	⊢	misc_feature
/note	= WT = C SNV = T				
✓ PAM	3342 .. 3344	3 bp	■	⊢	misc_feature
LRRK2-211	3361 .. 7436	4076 bp	■	→	prim_transcript
/note	= primary transcript ENST00000679532 Nonsense mediated decay				

Feature		Location	Size			Type
LRRK2-213		3362 .. 7436	4075 bp			prim_transcript
/note	= primary transcript ENST00000680018 Nonsense mediated decay					
LRRK2-215		3364 .. 7436	4073 bp			prim_transcript
/note	= primary transcript ENST00000680422 Nonsense mediated decay					
LRRK2-217		3364 .. 7436	4073 bp			prim_transcript
/note	= primary transcript ENST00000680453 Nonsense mediated decay					
LRRK2-216		3452 .. 7436	3985 bp			prim_transcript
/note	= primary transcript ENST00000680425 Nonsense mediated decay					
LRRK2-219		5284 .. 7436	2153 bp			prim_transcript
/note	= primary transcript ENST00000681136 protein_coding_CDS_not_defined					
LRRK2-207		5609 .. 7436	1828 bp			prim_transcript
/note	= primary transcript ENST00000481256 protein_coding_CDS_not_defined					

Primer	Length		Binding Sites		Tm	Date Added
✓ PCR Forward	25-mer		2840 .. 2864		57°C	May 4, 2023
/sequence	= ATAGTACAGTGGCAGTCATATTTGC 40% GC / 7696.1 Da					
✓ Donor Sequence WT -> SNV	100-mer		3260 .. 3359		77°C	May 4, 2023
/sequence	= CAACAGGAATGTGAGCAGGCCAGTTTGAAAGCAAACACAAGAGGGTTTTGTGTCTTTCCCTCCAGGCTTGCCTTCTTCTT 60% GC / 7696.1 Da					
✓ gRNA Protospacer	20-mer		3322 .. 3341		62°C	May 4, 2023
/sequence	= AAGAAGAAGCGCGAGCCTGG 60% GC / 6225.1 Da					
✓ Sanger Sequencing Primer	20-mer		3472 .. 3491		58°C	May 4, 2023
/sequence	= CAGATTCCTCGGTGGCATTG 55% GC / 6084.0 Da					
✓ PCR Reverse	25-mer		3895 .. 3919		58°C	May 4, 2023
/sequence	= AGAAGAAAGATGATCCCAAGACCTC 44% GC / 7677.1 Da					