

ASK2J00170_LRRK2_I2020T_F04_AB
8314 bp

5'
3'

ACACTGGAGTGGAAAAGGCTGTGGTCTTTGAAGACAAAAGGCCTGGGATTCATCACTATTCCACACATTTAGTAACTGTGATTTTA
TGTGACCTCACCTTTCCGACACCAGAAACTTCTGTTTTCCGGACCCTAAGTAGTGATAAGGTGTGTAAATCATTGACACTAAAAT

85

LRRK2

LRRK2-201

TATCTCTGATTCCCATTTTTTAAATAGTCTGTGAACCATGACTAATATTTAATGCATAAAAATTATGATGACTTCTGTAATAATTG
ATAGAGACTAAGGGTAAAAAATTTATCAGACACTTGGTACTGATTATAAATTACGTATTTTAATACTACTGAAGACATTATTAAC

170

LRRK2

LRRK2-201

GAGACATTCCAGATGAAACTCTTGATGTCCCCTCTGCCATTGCTCCCCAACCCAGTCACCCTGTTACACCTGAGAGTCACCTTA
CTCTGTAAGGTCTACTTTGAGAACTACAGGGGAGACGGTAACGAGGGGTTGGGGTCAGTGGGACAATGTGGACTCTCAGTGGAAAT

255

LRRK2

LRRK2-201

CATTCTTTCTTCTCTCTCATTTCACAGCTAATCCTTCAGCAAACTTTTTAGCTCTGCCACCAAAAATATATCTTAATGCTTCT
GTAAGGAAAAGAAGGAGAGAGTAAAGTGTCTGATTAGGAAGTCGTTTAGAAAAGTCGAGACGGTGGTTTTATATAGAATTACGAAGA

340

LRRK2

LRRK2-201

AACAATTTCTCTCACTAACGTCTAAATCTGAGCCAGTATCATCTCTCATTGCCTACTGGTCCCCTGCTTCTACCTCTGTCTCATG
TTGTTAAAGAGAGTGATTGCAGATTTAGACTCGGTCATAGTAGAGAGTAACGGATGACCAGGGGACGAAGATGGAGACAGAGTAC

425

LRRK2

LRRK2-201

ATAGTCCCATTCTCACCCAGCCTCTGGAGTGATTTTTCTAACATGAAAGTTGGATCAGGACTTGTTCCTGTTATTACCCCTCCC
TATCAGGGTAAGGAGTGGGTCTGGAGACCTCACTAAAAAGATTGTACTTTCAACCTAGTCCTGAACAAGGACAATAATGGGGAGGG

510

LRRK2

LRRK2-201

CTGCCTTATTTCTTGGGTACAGTGCTCAGCCACTCCCATCCCTGAGGTTCCCTTGCAGATACCAGAGGCTTTATATCTGCTGTTGA
GACGGAATAAAGAACCCATGTCACGAGTCGGTGAGGGTAGGGACTCCAAGGAACGTCTATGGTCTCCGAAATATAGACGACAAC

595

LRRK2

LRRK2-201

TTTCACTCAGGAATGTCTGACTCCCAGATGTGCTCTCTACTTATTATAAAGGATTATCTGAATCTTTCTGAATCCTTTTCATTTAG
AAAGTGAGTCCTTACAGACTGAGGGTCTACACGAGAGATGAATAATATTTTCTAATAGACTTAGAAAAGACTTAGGAAAGTAAATC

680

LRRK2

LRRK2-201

GACTCTCAGCAGAGAGGATGTCCGCAACGACCCTTTGTCTCTCCAGCCCCTATAGGACTATTGCTGCCTAGGATTCTTTATGTTT
CTGAGAGTCGTCTCTCTACAGGCGTTGCTGGGAAACAGAGAGGTCGGGGATATCCTGATAACGACGGATCCTAAGAAAATACAAA

765

LRRK2

LRRK2-201

TCATTTTTTAAAACTTATTTATTGTCTGTCTTGCATCAGAATCTAAGTACCATGAAAGAAGGGACTTTTCGTCTTGTGTTGCCA
AGTAAAAAATTTTTGAATAAATAACAGACAGAACGGTAGTCTTAGATTTCATGGTACTTTCTTCCCTGAAAAGCAGAACAACCGGT

850

LRRK2

LRRK2-201

TTGTATCTCTAGCTCCTAAAAATAGTAAGCCTTCAGAATTACTGTGTTGACAGTAGGGGAAGGGGGAGAAAAGGAGGAAAGAAGGAA
AACATAGAGATCGAGGATTTTATCATTTCGGAAGTCTTAATGACACAACCTGTCATCCCCTTCCCCTCTTTCTCCTCTTTCTTCTCTT

935

LRRK2

LRRK2-201

AACAGTGCCTGGGGCATAGAAGCCAAGCAGTGTATGCAACTTTCTTCTCTTCTTTCTTCTTCTGAAATGCTATGAATATGCCTTT
TTGTCACGGACCCCGTATCTTCGGTTCGTACATACGTTGAAAGGAAGAGAAGAAAAGAGAAGACTTTACGATACTTATACGGAAA

1020

LRRK2

LRRK2-201

TAGGTAGTATCCAGAAATGTTCTTCTGAAAGGGTCCAGAACTACTGAAACTGTACAGATTATGAAATGAAACAGGGTGCAG
ATCCATCATAGGTCTTTACAAGGAAGGACTTTCCAGGTCTTTGATGACTTTTGACATGTCTAATACTTTACTTTGTCCCACGTC

1105

LRRK2

LRRK2-201

GGATTTGGATTTGAGTTGATGTTTCTGCTTTTGAACACCAGGGGGAATCTTGGGTTACATTAATCTAGGTAAAAGTGCAGAAATAGT
CCTAAACCTAAACTCAACTACAAAGACGAAAACCTTGTGGTCCCCCTTAGAACCCAATGTAATTAGATCCATTTACGTCCTTATCA

1190

LRRK2

LRRK2-201

CTCCTGTATTTCAAGTGCCTCTTTCTTTCATTTAACTAACTCTAGGTTCTAGTTTTTCCCTAATTCTTCCACAAATCCCCAAAGT
GAGGACATAAAGTACGGGAGAAAAGGAAGTAAATTGATTGAGATCCAAGATCAAAAAGGGATTAAGAAGGTGTTTAGGGGTTTTCA

1275

LRRK2

LRRK2-201

GTTTTATTTATAAAGTGAAGAATTGCTATTTTTTAACACTGTTTCGAAACACCTTATCTCTAAAATGACTTATTCTAGTTCTCTGAA
CAAATAAATATTTCACTTCTTAACGATAAAAAAATTGTGACAAGCTTTGTGGAATAGAGATTTTACTGAATAAGATCAAGAGACTT

1360

LRRK2

LRRK2-201

ACCTTACTTTAAATAACAAATCCAGCAGTTTCTGATGAAGTAAATGAAATGTCAGCATATTTTAAATAATTTGCCTAATTTGTT
TGGAATGAAATTTATTGTTTAGGTCGTCAAAGACTACTTCATTTACTTTACAGTCGTATAAAATTTTATTAAACGGATTAACAA

1445

LRRK2

LRRK2-201

CTTAGCATAATGCCAGAAAAGCTTTCTGGATTTTGTATCACAAAAGGCTAGTAGATTTTCAGTAGCTATCAATCTTCTACCAGCAC
GAATCGTATTACGGTCTTTTCGAAAGACCTAAAACATAGTGTTCGGATCATCTAAAGTCATCGATAGTTAGAAGATGGTCGTG

1530

LRRK2

LRRK2-201

TAAGTATATTTTAAAAACTCAGCATTAAAGGTTTATTTTTCCAAGTATGTTTCAGCACAGGAAATAAAATCATGCTCCTTTGGAGT
ATTCATATAAAATTTTTGAGTCGTAATTCAAAATAAAAAGGTTTATACAAAAGTCGTGTCTTTATTTTAGTACGAGGAAACCTCA

1615

LRRK2

LRRK2-201

CCCTTAAATGCTGGAGCTGTTTAGAGTGACATACAAGAACTTTCTTACGTTACATGCTCTCTCTTCTCCTCCATCTTGCTTTTAAAC
GGGAATTTACGACCTCGACAAATCTCACTGTATGTTCTTGAAGAAGTGCAATGTACGAGAGAGAAGGAGGTAGAACGAAAATTG

1700

LRRK2

LRRK2-201

TGTTAGCTTACTTCTCCAATTC AATCCACTTCGTTTGAAC TCTTTATCATAATTCTATAAACTTATGAAAATACAGTCAACTGC
ACAATCGAATGAAGAGGTTAAGTTAGGTGAAGCAAAC TTAGAGAAATAGTATTAAGATATTTTGAATACTTTTATGT CAGTTGACG

1785

LRRK2

LRRK2-201

ATTTTCTGTATGTTTCTGTGTTTCAATATCTTCAA AATGGAATGTACTGCCTTGGTACATCACCCACTATGAATCTGTTATTTCT
TAAAAGACATACAAAAGACACAAAAGTTATAGAAGTTT TACCTTACATGACGGAACCATGTAGTGGGTGATACTTAGACAATAAAGA

1870

LRRK2

LRRK2-201

GTTATATCCCACAGTTGCCAGGCCAGGATACTTGT CCCCATCCAGGCCAAACACCTTCCCCCGAAAAGCAAGTATGCATTTGTCCAC
CAATATAGGGTGTCAACGGTCCGGTCCCTATGAACAG GGTAGGTCCGGTTTGTGGAAGGGGGCTTTTCGTTCATACGTAAACAGGTG

1955

LRRK2

LRRK2-201

CAGGTCCTTGACTCTATTTTACATTATCTTTTTAG TCAATTCATTTATTTTTATGCCACTCCTGCTGTCTTGGTT CAGTATGTCC
GTCCAGGAACTGAGATAAAATGTAATAGAAAAATCAG TTAAGTAAATAAAAAATACGGTGAGGACGACAGAACCAAGTCATACAGG

2040

LRRK2

LRRK2-201

AGGGAATTATCAGAATTTCTTTTCTAAAATAAAAAT CTGTTTATGCTTGCAATTCCTTGACAGTTCTCAATTATCTGCAAAGTGC
TCCCTTAATAGTCTTAAAGAAAAGATTTTATTTTTAG ACAAAATACGAACGTTAAGGAACTGTCAAGAGTTAATAGACGTTTCACG

2125

LRRK2

LRRK2-201

ATCCAAACTTCTTGGCATAGCATCAAAGATCTTTCT GTATGCCTCTTGTCTTCCCTTTGCGGCCCTGCCACCCCACTGCCACAC
TAGGTTTGAAGAACC GTATCGTAGTTTCTAGAAAAGACATACGGAGAACGAAGGGAAAACGCCGGGGACGGTG GGGGTGACGGGTGTG

2210

LRRK2

LRRK2-201

TGCATTCTAGCCGTGATGACAGGCTTGAATTTTCA GTTATGCTCATGTCTGTCCATCATTGTATTTGTTATTCTCTCTTTCCAC
ACGTAAGATCGGCACTACTGTCCGAACTTAAAAGTCA ATACGAGTACAGACAGGTAGTAACATAAAACAATAAGGAGAGAAAAGGTG

2295

LRRK2

LRRK2-201

CAAGTTGTCTGCCTAGAGAGCTCATTTTCTTAAGA ATTTCTTTCACAAAACCATCTCTACTATGAAGCTCAAGTGTGTCATGAAGT
GTTCAACAGACGGATCTCTCGAGTAAAAGGAATTC TTAAGAAGTGTTTTGGTAGAGATGATACTTCGAGTTCACACAGTACTTCA

2380

LRRK2

LRRK2-201

GTTAGCTTCTCCAAC TGTGTTTCTTGCAGACACTCTGTGCAAGACATTGACTTAGGTGCTAAAAGAGGGAAAAGCTAGATATTATA
CAATCGAAGAGGTTGAACACAAAAGAACGTCTGTG GAGACAGTCTGTGTAAC TGAATCCACGATTTCTCCCTTTTCGATCTATAATAT

2465

LRRK2

LRRK2-201

TTGTTCTTGAGGTTGAAAGCTTACAGTCTAGTAGG AGAGTCAACTTTGCTGTCTTTACCTCAGTGTTTTTCTCCCTCTGTGCTTC
AACAAGAACTCCAAC TTTTGAATGTCAGATCATCCTCTCAGTTGAAACGACAGAAATGGAGTCACAAAAAAGAGGGAGACACGAAG

2550

LRRK2

LRRK2-201

CCTAGCACGTGGTACTTACATATTTCTGGAATCTTGATTAAACACCTGTTTGAGGACTGTCTGAGCACAATCCTTCTGGATTGTG
GGATCGTGCACCATGAATGTATAAAGACCTTAGAACTAATTTGTGGACAAACTCCTGACAGACTCGTGTAGGAAGACCTAACAC

2635

LRRK2

LRRK2-201

ACACCCTCAAGGGAGCAGAGATACAAAGATGGCTTTGTATACTAAATGACTGGCCCTCATAGATACCTAGTACATATTTGTCAA
TGTGGGAGTTCCCTCGTCTCTATGTTTCTACCGAAACATATGATTTACTGACCGGGAGTATCTATGGATCATGTATAAACAGTTT

2720

LRRK2

LRRK2-201

TAAATGAATGCATTCTATTTTTGGAATAATTCTATTCAGAATCAGATAAAGTTTACTTTAAGCTATGAAGAAAGAAGTCTCTTAG
ATTTACTTACGTAAGATAAAAACCTTATTAAGATAAGTCTTAGTCTATTTCAAATGAAATTCGATACTTCTTTCTTCAGAGAATC

2805

LRRK2

LRRK2-201

CAACTCTTACAATAATCACAAATCAAAGAATGACTGTTTAACTTAATATAAAACCAGTTTGTTTTAAATAAAATATTTGACAATAGTC
GTTGAGAATGTTATTAGTGTAGTTTCTTACTGACAAATTGAATTATATTTGGTCAAACAAAATTATTTTATAAACTGTTATCAG

2890

LRRK2

LRRK2-201

ATGGTTACACAATGCATAAATTATGGCTAAATTATTATCAGGAAGGAAAAATCTTTACTTATTATTTCAAAGCTATTTTGCTAG
TACCAATGTGTTACGTATTTAATACCGATTTAATAATAGTCCTTCTTTTTAGAAATGAATAATAAAGTTTTTCGATAAAACGATC

2975

LRRK2

LRRK2-201

TCTATTAAGCTATTAGAACTGCACCTTCTTAAGATTAAATTCTATAATTGAACATTTTAACTAACCAAGATATTATCTCTTTGC
AGATAATTTTCGATAATCTTGACGTGAAGAATTCTAATTTAAGATATTAACCTGTAAAATTGATTGGTTCTATAATAGAGAAACG

3060

LRRK2

LRRK2-201

CACTGACATTATTTCAAATTAAGCTTAACTATTTCTTTTTAGCCTTTGGAAAGTATTCTGAAAGAGTCTGTGTTCTATAAATATA
GTGACTGTAATAAAGTTTAATTCGAATTGATAAAGAAAAATCGGAAACCTTTCATAAGACTTCTCAGACACAAGATATTTATAT

3145

LRRK2

LRRK2-201

CTTAAAGAGGCATGTCTTATAAAGGATTTGGATACTATTCAATGATGTATGACTTGGCTTTAGCTTTTTTATTCTTAATCTCTCA
GAATTTCTCCGTACAGAATATTTCTTAAACCTATGATAAGTTACTACATACTGAACCGAAATCGAAAAAATAAGAATTAGAGAGT

3230

LRRK2

LRRK2-201

GCTTTTCTCTTCAGCAGGGGAAGAGTACCTAATGGCCTTTCAGTAATCCCTTGGTAAATTTTTCTTTCAAGCCATTACTTACTG
CGAAAAGAGAAGTCGTCCCTTCTCATGGATTACCGGAAAGTCATTAGGGGAACCATTTAAAAAGAAAAGTTTCGGGTAATGAATGAC

3315

LRRK2

LRRK2-201

TGAAGGTCAACTTCATTAGTGTATTTATCTTATTTTTTTTCAGCCCAAAATAGGTATATTGAAATGAATGGGCCTAATGTCAAATG
ACTTCCAGTTGAAGTAATCACATAAATAGAATAAAAAAAGTCGGGTTTTATCCATATAACTTTACTTACCGGATTACAGTTTAC

3400

LRRK2

LRRK2-201

TCCCGACTACATCCTGGAAGAGAGAGAATCTTCAGCTGTATTAGTTGATGCAGTTAAATAATATGTACTCTCCAGGCCCTCATA
AGGGCTGATGTAGGACCTTCTCTCTCTTAGAAGTCGACATAATCAACTACGTCAATTTATTATACATGAGAGGTCGGGGAGTATG

3485

LRRK2

LRRK2-201

AATTGAAAGTTCAGGGTATCGTTGCTGCTCTGCTTCTAATCCTTCCAGAAGTGATTGGTGCTAGGTGATGGAGTAACTATTAATT
TTAACTTTCAAGTCCCATAGCAACGACGAGACGAAGATTAGGAAGGTCTTCACTAACCACGATCCACTACCTCATTGATAATTAA

3570

LRRK2

LRRK2-201

GATATAATGTGAGCCAAAACCAACAGTCACGAATAAGCAAAGGATTTAAATTTAACTCCATTAAGTCTTGTGAGAAATTATTTTC
CTATATTACACTCGGTTTTGGTTGTCAGTGCTTATTTCGTTTTCTAAATTTAAATTTGAGGTAATTCAGAACACTCTTTAATAAAAAG

3655

LRRK2

LRRK2-201

AACATAGGTTATAACATACCTGTGACATCACATGAAATGCTGTAGTCAATTTGACATCATGGGGCAGAGAAGACAGAGTTGGAAA
TTGTATCCAATATTGTATGGACACTGTAGTGTACTTTACGACATCAGTTAAACTGTAGTACCCCGTCTCTTCTGTCTCAACCTTT

3740

LRRK2

LRRK2-201

TCAGAATTTTATAGACATCTAATGTGATAATAACATTAGTAGCTGAGATGCGGTAAGCTCTTTGACCATGTTTCCAGAATGGATA
AGTCTTAAAATATCTGTAGATTACACTATTATTGTAATCATCGACTCTACGCCATTTCGAGAAACTGGTACAAAAGGTCTTACCTAT

3825

LRRK2

LRRK2-201

AGACCTGGTTGAGATGAAAACCTTTACACTGTTTTTTTATATTAATCTTTTTACTCTTTGCCTGAAATGTCCAACCTCTAGTTGC
TCTGGACCAACTCTACTTTTGAAATGTGACAAAAAATAAATTGATAGAAAATGAGAAACGGACTTTACAGGTTGAGATCAACG

3910

LRRK2

LRRK2-201

TCGTGATTGCGTGGGTCAGTCTCCAGAAGGTTGGACTTTAATATTACCCGTCATCTTTTTCCAAGACAAAATTGTATTCATTCTAA
AGCACTAACGCACCCAGTCAGAGGTCTTCCAACCTGAAATTATAATGGGCAGTAGAAAAGGTTCTGTTTTAACATAAGTAAGATT

3995

LRRK2

LRRK2-201

CTCTTAGCCCCAAATTTTCTTTTTTAACCTTAATATCTAACATGATTAGGTTTATGGTAAATTATATACTCAAACAGAAGAAGAG
GAGAATCGGGGTTTTAAAAGAAAAAATTGGAATTATAGATTGTAATAATCCAAATACCATTTAATATATGAGTTTGTCTTCTTCTC

4080

LRRK2

LRRK2-201

ACTAATAGCAAGCAAAAAGTCTTATATTTTCATTTGTTTTTCATCCAAAAAGTAGAAAATATTTTCCAACATTGGGAAACATTTTA
TGATTATCGTTTCGTTTTTCAGAATATAAAAAGTAAACAAAAAGTAGGTTTTTCATCTTTTTATAAAAAGGTTTGTAAACCTTTGTA
AAAAT

4165

LRRK2

LRRK2-201

PCR Forward Primer

aagctgagctaaacctctatgtgg

GTCAGAAAAATAAATATCAATGATAAATAGAATAGAGAAAAATTTTAAAGCTGAGCTAAACCTCTATGTGGTTTTAGGAAAAATCA
CAGTCTTTTTATTTATAGTTACTATTTATCTTATCTCTTTTTAAAATTTGACTCGATTTGGAGATACACCAAAAATCCTTTTTAGT

4250

LRRK2

LRRK2-201

AAACTATTAATAAATGGCAAGTACAACAAAATCCCATCAATTCTTATTTAACATACTTACATTTTGAAATAGTTAAAATATTCA
TTTGATAATTTATTTACCGTTCATGTTGTTTTAGGGTAGTTAAGAATAAATTGTATGAATGTAAAACCTTTATCAATTTTATAAGT

4335

LRRK2

LRRK2-201

TATGATCATTGAGAGAATTCAGAATTGCCTTTAAGTAATTGTTACATATACAAAAGAAAAGTCTCCAAAATTGGGTCTTTGCC
ATACTAGTAACTCTCTTAAGTCTTAACGGAAATTCATTAACAAGTGTATATGTTTTCTTTTCAGAGGTTTTTAACCCAGAAACGG

4420

LRRK2

LRRK2-201

TGAGATAGATTTGCTTAAAAATTGAAATCATTCACTTATCAGATTTGACCCTTTTTAAAGCATAACTTTGCTGTGTAATATTAG
ACTCTATCTAAACAGAATTTTAACTTTAGTAAGTGAATAGTCTAAACTGGGAAAAAATTTTCGTATTGAAACGACACATTATAATC

4505

LRRK2

LRRK2-201

Sanger Sequencing Primer

aagggacaagtgagcacag

ACTTATATGTTTTGATTTCTTCTACAATATCTCTTAACTTTAAGGGACAAAGTGAGCACAGAATTTTGTATGCTTGACATAGTG
TGAATATACAAAACCTAAAGGAAGATGTTATAGAGAATTGAAATTCCTGTTTCACTCGTGTCTTAAAAACTACGAACTGTATCAC

4590

LRRK2

LRRK2-201

GACATTTATATTTAAGGAAATTAGGACAAAATTTATTATAATGTAATCACATTTGAATAAGATTTCTGTGCATTTTCTGGCAGA
CTGTAATATAAATTCCTTTAATCCTGTTTTAATAATATTACATTAGTGTAACCTTATTCTAAAGGACACGTAAAAGACCGTCT

4675

LRRK2

LRRK2-201

LRRK2-201

gRNA Protospacer

A

TACCTCCACTCAGCCATGATTATATACCGAGACCTGAAACCCCAATGTGCTGCTTTTTCACACTGTATCCCAATGCTGCCATCA
ATGGAGGTGAGTCGGTACTAATATATGGCTCTGGACTTTGGGGTGTTACACGACGAAAAGTGTGACATAGGGTTACGACGGTAGT

4760

LRRK2

LRRK2-201

Y L H S A M I I Y R D L K P H N V L L F T L Y P N A A I

ENSE00003681812

LRRK2-201

Donor Template WT -> SNV

Protospacer Sequence

ATAGGGTTACGACGGTAGT

Donor Template WT -> SNV

gRNA Protospacer

TTGCAAAGATTGCTGACTA

TTGCAAAGATTGCTGACTACGGCATTTGCTCAGTACTGCTGTA6AATGGGGATAAAAAACATCAGAGGGCACACCAGGTAGGTGATC
AACGTTTCTAACGACTGATGCCGTACGAGTTCATGACGACATCTTACCCCTATTTTTGTAGTCTCCCGTGTGGTCCATCCACTAG

4845

LRRK2

LRRK2-201

I A K I A D Y G I A Q Y C C R M G I K T S E G T P G R *
ENSE00003681812
LRRK2-201

Donor Template WT -> SNV

Protospacer Sequence

PAM

SNV

Silent SNV

AACGTTTCTAACGACTATGCCGTACGAGTTCATGACGACATCTTACCCCTATTTTTGTAGTCTCCCGTGTGGTCCatcca

Donor Template WT -> SNV

AGGTCTGTCTCATAATTCTATCTTCAGGATGGATAACCACTGACCTCAGATGTGAGTTTCAGAAGAGTCAAAAAGGAAAAACAGAGTC
TCCAGACAGAGTATTAAGATAGAAAGTCTACCTATTGGTGGACTGGAGTCTACACTCAAGTCTTCTCAGTTTTCTTTTGTCTCAG

4930

LRRK2

LRRK2-201

TATCACATTGTGAACAGAGGTTTTATTTTTGTGAAAAATGCAAGCATCACATTGTGATTTTTATCATTGTATTTTTGTAGGAAAAAA
ATAGTGTAACACTTGTCTCCAAATAAAACACTTTTTTACGTTTCGTAGTGTAACACTAAAAATAGTAACATAAAACATCCTTTTTT

5015

LRRK2

LRRK2-201

ACAATTGATGTAATTTTTCAGGGCAAAAACCTGAATAAAAAGAAGAGAATGTTTGATATCAAGTTATATGTTTTAAAGTTAGATTT
TGTTAACTACATTA AAAAGTCCCGTTTTT GACTTATTTTTCTTCTCTTACAAACTATAGTTCAATATACAAAATTTCAATCTAAA

5100

LRRK2

LRRK2-201

GTAGATTCTTTAGATACTCTAGAGGTCATAAAAAGTAACAGCAAAAACCTTTAGTCTAGGTATTGTTGGCACTTGTGAGGCAAAATC
CATCTAAGAAATCTATGAGATCTCCAGTATTTTTATTGTCGTTTTTGAATCAGATCCATAACAACCGTGAACACTCCGTTTTAG

5185

LRRK2

LRRK2-201

ccgtgaacactccgtttag
PCR Reverse Primer

AAATTCAGGTCCACAAATTTCTTTTTCATAATTCTGAAACCCAAAGAACTCTGAAAATCCCAAGATTTTTTAAAAAATGACTAATT
TTTAAGTCCAGGTGTTTAAGAAAAAGTATTAAGACTTTGGGTTTCTTGAGACTTTTAGGGTTCTAAAAAATTTTTTACTGATTAA

5270

LRRK2

LRRK2-201

tttaa

PCR Reverse Primer

TGGTGTCAAAAACCTAAGCAAGCTGACTTGTGCTTATTACAATCTTTATTTCTCATGCTCAGTGTGAATATGCATACATTTTTGCT
ACCACAGTTTTGGATTCGTTTCGACTGAACAACGAATAATGTTAGAAAATAAAGAGTACGAGTCACACTTATACGTATGTAAAACGA

5355

LRRK2

LRRK2-201

GCAGAAATATATACATGTTTGGAGTACAGGGGGCTGGCCGTGACCCTACTGAGGGTTTCTGTACACATCACTGTCTACCCTGTGGA
CGTCTTTATATATGTACAAACTCATGTCCCCCGACCGGCACTGGGATGACTCCCAAAGACATGTGTAGTGACAGATGGGACACCT

5440

LRRK2

LRRK2-201

ATCTTACCTCCCTTTCTTAGTTCCCAATCCTGAAAAGCAGTTATGGGGCCAGTGCTCTGTACAGACATGTTGTCTCAGACATCAG
TAGAATGGAGGGGAAAGAATCAAGGGTTAGGACTTTTCGTCAATACCCCGGTCACGAGACATGTCTGTACAACAGAGTCTGTAGTC

5525

LRRK2

LRRK2-201

TTTGAGCAGGAAGTAAATCATTAGGGGTTGGCATTGTTTGGAGTGTGGGGAACACTCTATCTTTAGGGAAACTTTATATAGTT
AAACTCGTCCTTCATTTAGTAAATCCCAACCGTAAACAAACCTCACACCCCTTGTGAGATAGAAATCCCTTTGAAATATATCAA

5610

LRRK2

LRRK2-201

AGTTATTTGTAAGTAAAATTACAGGTGGCTATACATCATCTTGCTGATTGCAACTCAATTAATCACCGTGCCTGGCACAGAAGA
TCAATAAACATTCATTTTAATGTCCACCGATATGTAGTAGAACGACTAACGTTGAGTTAATTTAGTGGCACGGACCGTGTCTTCT

5695

LRRK2

LRRK2-201

AAATATGCTACAGGATATCTCACTAGGGAAAAGGTTCTAGTTTCGTTTCTGCGCACTCAACTTTTGTACTTAGATAAGCAAATGG
TTTATACGATGTCTTATAGAGTGATCCCTTTTCCAAGATCAAGCAAAGGACGCGTGAGTTGAAAACATGAATCTATTCGTTTACC

5780

LRRK2

LRRK2-201

CCCCAGATTCCAATGCCTGGTTTTATTTTTGCTCCAAATACATATATACTCTTTTTGTTTTGGATAGTTACATTTTGAAGTAGAC
GGGGTCTAAGGTTACGGACCAAAATAAAAACGAGGTTTATGTATATATGAGAAAACAAAACCTATCAATGTAAATCTTCATCTG

5865

LRRK2

LRRK2-201

TGTGTATTCTCATAAACACTTCAAAGTGTATGTTCTGGCTGAGAGTGTCTCTGTGTTGTTCAATAATAAAGACTAATTATCAT
ACACATAAGAGTATTTGTGAAGTTTCACATACAAGACCGACTCTCACAGAGACACAACAAGTTATTATTCTGATTAATAGTA

5950

LRRK2

LRRK2-201

TTTTTGAGTACCTGCTGTGCGTCAGGCCAGTGCCACGTATATTAGAGACAAGATCTCTTATCCTCATGCCAGGGCTGGAAGTTA
AAAACTCATGGACGACACGCAGTCCGGGTACGGTGCATATAATCTCTGTTCTAGAGAATAGGAGTACGGTCCCAGACCTTCAAT

6035

LRRK2

LRRK2-201

GCTATTAGTTTCTCATTTGCCAAATGAGAAAACCTGAGGCTCAGGGAGATTATGTAACCTGCAGAATATCACTCAGTAATTGGCCA
CGATAATCAAAGAGTAAACGGTTTACTCTTTTGAAGTCCGAGTCCCTCTAATACATTGAACGCTTATAGTGAGTCATTAACCGGT

6120

LRRK2

LRRK2-201

AGATAAGAATTCAGTCTAAATGAGAACCAGATCCAGAGATATTTGGCTTTAAATTTCTATAGTCTCTCCTAAACCATATGCAACTC
TCTATTCTTAAGTCAGATTTACTCTTGGTCTAGGTCTCTATAAACCGAAATTTAAGATATCAGAGAGGATTTGGTATACGTTGAG

6205

LRRK2

LRRK2-201

TAACATGAAGAAGCTTATTTAATCTTCACTATTAATAAAAGTCAAAAACAAAACAACAGAGCCATGAATAGCAAATATTGTCAATGA
ATTGTACTTCTTCGAATAAATTAGAAGTGATAATTTTTTTCAGTTTTGTTTTGTTGTCTCGGTACTTATCGTTTTATAACAGTTACT

6290

LRRK2

LRRK2-201

GAGGTTTTGGAAAAACAGTCTTAAAGGATGAAATTCCATAGACCTGATATATTTCCACCTGGAAAAAGTGGGCATGGGACAGTGAT
CTCCAAAACCTTTTTGTCAGAATTTCTACTTTAAGGTATCTGGACTATATAAAGGTGGACCTTTTTTCACCCGTACCCTGTCACTA

6375

LRRK2

LRRK2-201

TTTCTCTTGAAAGATCTGCTCATTTTTGTCATGGGACATGAAGGTGGACTGGACCACTCAGTTTCTTCTTTCTGCATCTCCCAAC
AAAGAGAACTTTCTAGACGAGTAAAAACAGTACCCTGTACTTCCACCTGACCTGGTGAGTCAAAGAAGAAAGACGTAGAGGGTTG

6460

LRRK2

LRRK2-201

CCAGTCTTTCTGTTTCATGGGGTGAAAATCTGTTGTTGAAGCCTTGCTGCTTAATTGGACAGTGGATCTCTCGGGTCCCTGTGGG
GGTCAGAAAGACAAGTACCCCACTTTTAGACAACAACCTTCGGAACAGACGAATTAACCTGTCACCTAGAGAGCCCAGGGACACCC

6545

LRRK2

LRRK2-201

CTGTGCGCTTGTACTIONGAGCTCTGCTTCTTCACTCTGTGGTCTAGGCCAGCTAGCAGCCAGCTGAGTTCACCTTGGTTCAGACTC
GACACGCGAACATGAACTCGAGACGAAGAAGTGAGACACCAGATCCGGTCGATCGTTCGGTTCGACTCAAGTGGAACCAAGTCTGAG

6630

LRRK2

LRRK2-201

ATGGCCTTTTCATTTTCAGTATCTGACTTCTGCTGGTTTTGCTGAAAACCTGTCTAAAATGTAATATCCATCTGATTCTTTCATACCAA
TACCGAAAAGTAAAAGTCAAGACTGAAGGACCAAAAACGACTTTTGGACAGATTTTACATTATAGGTAGACTAAGAAGTATGGTT

6715

LRRK2

LRRK2-201

GCCACACAATTCTTCTGATCCCTTTTAATCTCCAATATTGAATGGTGGTAACATAAATATGGAGACAGATCATGTCAGAAACCC
CGGTGTGTTAAGAAGGACTAGGGAAAATTAGAGGTTATAACTTACCACCATTGTATTTATACCTCTGTCTAGTACAGTCTTTGGG

6800

LRRK2

LRRK2-201

AGGGCCTAATCTTTTTCTTTCTGCTACTCTTCTCACAGGCTGCTTAGTACTTTGTAAGCTTTTTTTTTTTTTCTGGCTGTAACC
TCCCGGATTAGAAAAGAAAAGACGGATGAGAAGAGTGTCCGACGAATCATGAAACATTCGAAAAAAAAAAAAAGACCGACATTGG

6885

LRRK2

LRRK2-201

TAGATTTTCTCTTTATCATTACTCTATTTATTATTGTTAGAGCACTTCTGATTATCTCAGCCCTAAACTCTGCCTCCAATTTTAA
ATCTAAAAGAGAAATAGTAATGAGATAAATAATAACAATCTCGTGAAGACTAATAGAGTTCGGGATTTGAGACGGAGGTTAAAATT

6970

LRRK2

LRRK2-201

ATAACAATAACTCCCCTCCTGCTAATACTGCTACTACTACTACCATCACCAAACCTTTTTCTTCCCAAAGCAGTTCTGTTTGGG
TATTGTTATTGAGGGTGAGGACGATTATGACGATGATGATGATGGTAGTGGTTTGA AAAAAGAGGGGTTTCGTCAAGACAAAACCC

7055

LRRK2

LRRK2-201

AAGGAAACAGTTCCCTCTCATACAATTTTCAGTTATCTTCTTGTCTTTTCCGTTTAATGAATCTTCCTGTTAATGTTACATCTTTT
TTCTTTTGTCAAGGGAGAGTATGTTAAAGTCAATAGAAGAACAGAAAAGGCCAAATTACTTAGAAGGACAATTACAATGTAGAAAA

7140

LRRK2

LRRK2-201

AACATGGAACTTCTAGAGAAACAAAAGACGATGGATTTGTTAAACCTTTTGGGTGTATTTTTATACTAACTCTTACTGCAGCGT
TTGTACCTTTGAAGATCTCTTTGTTTTCTGCTACCTAAACAATTTGGAAAACCCACATAAAAAATATGATTGAGAATGACGTCGCA

7225

LRRK2

LRRK2-201

GTGCATTATGAGTGTAGGTCCATTACGGCTGTATTAGGAGCAGAACCTTCCAGAGCATGAGCGATGTGCTGGGCTTGTGCTTAGC
CACGTAATACTCACATCCAGGTAATGCCGACATAATCCTCGTCTTGGAAAGTCTCGTACTCGCTACACGACCCGAACACGAATCG

7310

LRRK2

LRRK2-201

TCTATCCATGAGTTAAGTATCTCAATCCTTAGGACCCTCTGACATATGTGCTATTATTATTTCTAGTCTATAGATACAGAGACTA
AGATAGGTACTCAATTCATAGAGTTAGGAATCCTGGGAGACTGTATACACGATAATAATAAAGATCAGATATCTATGTCTCTGAT

7395

LRRK2

LRRK2-201

AAGTTTAGAGAATATAAAAAAACATTTACAAGGTCCTATGGGACAAAACTGTAGGACAAAATGCAAACCCAAGCAGCCTGAGAG
TTCAAATCTCTTATATTTTTTTGTAATGTTCCAGGATACCCTGTTTTTACATCCTGTTTTACGTTTGGGTTTCGTCGGACTCTC

7480

LRRK2

LRRK2-201

CAGAGCTCCTGGTCCAGCACTGTGATAGCTGGGGACGCAGAGACAGAAACAATGCAATTATTGACAGGGACCATGGTGTGTGTC
GTCTCGAGGACCAGGTCGTGACACTATCGACCCCTGCGTCTCTGTCTTTGTTACGTTAATAACTGTCCCTGGTACCACGACACAG

7565

LRRK2

LRRK2-201

TGTCCACATTTTGAAGATAATTATGGTTTGGATATTTTACCTTTAAATAACTTGGAGAGTTTCAACATTAECTCAGTCAGATGG
ACAGGTGTAACCTTCTATTAATACCAAACCTATAAAAGTGGAAATTTATTGAACCTCTCAAAGTTGTAATTGAGTCAGTCTACC

7650

LRRK2

LRRK2-201

ATACATTTATATCATATCCTGCTGGGAGTGACAGTTAATTTCTGGGTCCTATGGCAATTGCACTTTTACTGAGATGAATGCTGAC
TATGTAATATAGTATAGGACGACCCTCACTGTCAATTAAGACCCAGGATACCGTTAACGTGAAAACCTGACTCTACTTACGACTG

7735

LRRK2

LRRK2-201

TGATGGCTTTAACATTTAACTAATGCGATAGTATTTAACACACCCATATAAAACTATAGTCTTCGGGTAAATAAAATGTTACCG
ACTACCGAAATTGTAATTTGATTACGCTATCATAAATTTGTGTGGGTATATTTATGATATCAGAAGCCCATTTATTTTACAATGGC

7820

LRRK2

LRRK2-201

GCTGGACATACATGAATATCTGATGGAGATTATGGAACATACTCTACTCATACTTCTCTGAAAGTAAAAATAAAAGATATGTTT
CGACCTGTATGTAATTTAGACTACCTCTAATACCTTGTATGAGATGAGTATGAAGAGACTTTTCAATTTTTATTTTCTATACAAA

7905

LRRK2

LRRK2-201

CAGTACACAATGTGATATGTACTCAGACTTAATTCATAAATTTCTCTTATCCTTCATCCGTGGATCTTTTCTTTACTTATT
GTCATGTGTTACACTATACATGAGTCTGAATTAAGTATTTAAAGAGAATAGGAAGTAGGCACCTAGAAAAAGAAATAAATGAATAA

7990

LRRK2

LRRK2-201

GCGTTTGTTAAAATGCAGGCTTCTCTGAAAAATTATTTTTAAAAATAGTTTTTAGACAATGAATCATATTTTCTCAAGTATTTTA
CGCAACAATTTTACGTCCGAAGAGACTTTTTAATAAAAAATTTTATCAAAAATCTGTTACTTAGTATAAAAAGAGTTCATAAAAT

8075

LRRK2

LRRK2-201

ACATTGTAATCATTATGATAATTATCCAAGGGGAAATTATACTTATTTTTTATTCATTTATTCATTCATTTGGCAACAATACATT
TGTAACATTAGTAATACTATTAATAGGTTCCCTTTAATATGAATAAAAAATAAGTAAATAAGTAAACCGTTGTTATGTAA

8160

LRRK2

LRRK2-201

GAACATTTACTAAGCATCAAACCTGGCTCTACCACTTAATAGTGGCATGATGTTTCATCAAGAAATTGTTAGTGCAATCAAGAACAC
CTTGTAATGATTCGTAGTTTGACCGAGATGGTGAATTATCACCGTACTACAAGTAGTTCCTTTAACAATCACGTTAGTTCCTTG TG

8245

LRRK2

LRRK2-201

TAGAAATTCATTGGATGAATTTAAAGAAGCTTTTAGAAGGGTATTATATTATAATTGAGGCACTTTATG
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3'











8314

5'

LRRK2

LRRK2-201

Feature	Location	Size		Type
LINC02471	1 .. 8314	8314 bp	■ →	gene
/note	= gene ENSG00000223914 lncRNA			
LRRK2	1 .. 8314	8314 bp	■ →	gene
/note	= gene ENSG00000188906 Protein coding			
LINC02471-202	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000641941 lncRNA			
LRRK2-201	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000298910			
LRRK2-204	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000430804 Nonsense mediated decay			
LRRK2-206	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000479187 Retained intron			
LRRK2-210	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000679360 Nonsense mediated decay			
LRRK2-211	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000679532 Nonsense mediated decay			
LRRK2-213	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000680018 Nonsense mediated decay			
LRRK2-215	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000680422 Nonsense mediated decay			
LRRK2-216	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000680425 Nonsense mediated decay			
LRRK2-217	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000680453 Nonsense mediated decay			
LRRK2-218	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000680790			
LRRK2-219	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000681136 protein_coding_CDS_not_defined			
LRRK2-220	1 .. 8314	8314 bp	■ →	prim_transcript
/note	= primary transcript ENST00000681696			
LRRK2-201	4675 .. 4835	161 bp	■ →	CDS
/codon_start	= 1			
/note	= coding sequence ENSP00000298910			
/translation	= YLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCRMGIKTSEGTP 53 amino acids = 6.0 kDa			
LRRK2-218	4675 .. 4835	161 bp	■ →	CDS
/codon_start	= 1			
/note	= coding sequence ENSP00000505335			
/translation	= YLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCRMGIKTSEGTP 53 amino acids = 6.0 kDa			
LRRK2-220	4675 .. 4835	161 bp	■ →	CDS
/codon_start	= 1			
/note	= coding sequence ENSP00000505871			
/translation	= YLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCRMGIKTSEGTP 53 amino acids = 6.0 kDa			
Donor Template WT -> SNV	4742 .. 4841	100 bp	■ ⇐	misc_feature

Feature	Location	Size			Type
✓ Protospacer Sequence	4760 .. 4779	20 bp			misc_feature
✓ Silent SNV	4777 .. 4777	1 bp			misc_feature
/note = WT = C Silent SNV = T					
✓ PAM	4780 .. 4782	3 bp			misc_feature
✓ SNV	4785 .. 4785	1 bp			misc_feature
/note = WT = T SNV = C					

Primer	Length	Binding Sites	Tm	Date Added
✓ PCR Forward Primer	24-mer	4213 .. 4236	59°C	Mar 1, 2023
/sequence = aagctgagcctaacctctatgtg 46% GC / 7376.9 Da				
✓ Sanger Sequencing Primer	20-mer	4548 .. 4567	57°C	Mar 1, 2023
/sequence = aaggacaaagtgagcacag 50% GC / 6233.1 Da				
✓ Donor Template WT -> SNV	100-mer	4742 .. 4841	75°C	Mar 1, 2023
/sequence = acctacCTGGTGTGCCCTCTGATGTTTTTATCCCCATTCTACAGCAGTACTGAGCAGTGCCGTAATCAGCAATCTTTGCAATGATGGCAG CAATGGATA,740.0 Da				
✓ gRNA Protospacer	20-mer	4760 .. 4779	50°C	Mar 1, 2023
/sequence = ATTGCAAAGATTGCTGACTA 35% GC / 6140.1 Da				
✓ PCR Reverse Primer	24-mer	5167 .. 5190	59°C	Mar 1, 2023
/sequence = aatttgattgcctcacaagtgcc 42% GC / 7302.8 Da				