



**ASK2J00169\_LRRK2\_Y1699C\_G04\_AB**  
 10,076 bp

5'  
3'

CACATGTGAACATTAGGATGGGTATATCTTATACAGTAGAATAAGGAAGAGGTTTGCATCAGAAGTCCCTTTTAAAAAATGCA  
GTGTACACTTGTAATCCTACCCATATAGAATATGTCATCTTATTCTTCTCCAAACGTAGTCTTGAGGGGAAAAATTTTTTTACGT

85

LRRK2

LRRK2-201

GATTTTCACTATGACTGCAATAAAATTCCTGAAGATTCTGTGGAGTAATTAAGTTGAAACTCCATGAAAGTTCTTCTCATTAGCA  
CTAAAAGTGATACTGACGTTATTTTAAGGACTTCTAAGACACCTCATTAATTCAACTTTGAGGTACTTTCAAGAAGAGTAATCGT

170

LRRK2

LRRK2-201

TAGTTATAAATATGATAATTTAAGTAAAAATTAAGTTAATTTGAGCCACTCAAAGTTACTTTTTAAAGACAGATTTAAATGTCAA  
ATCAATATTTATACTATTAATTCATTTTTAATTCATTAATAACTCGGTGAGTTTCAATGAAAATTTCTGTCTAAATTTTACAGTT

255

LRRK2

LRRK2-201

TAAAATGATAATTTAAATTTCCGATTAACCTAAAAAAGAAGTGCCATCATTTTTATTTATGCCAATAAATTGAAATATAATGTCA  
ATTTTACTATTAATTTAAAGGCTAATTGGATTTTTCTTCACGGTAGTAAAAATAAATACGGTTATTTAACTTTATATTACAGT

340

LRRK2

LRRK2-201

TTTTATCACTAAGGTTTAAAGGAAATGAAATCTCTAAATAATCAAGTGAAACCAAGAGCAACTTGTCTGACAGCTATTAGCAAAA  
AAAAAGTAGTGATTCCAAATTTCTTTACTTTAGAGATTTATTAGTTCACCTTTGGTTCTCGTTGAACAGACTGTGCGATAATCGTTTT

425

LRRK2

LRRK2-201

ATAAATAGGAGTATTCACCTTCATGAATCAAGGCAAGGGCCGGAATAATTTTCATGGTGCAGAAGCTCTAATGAGCCCACCCACTC  
TATTTATCCTCATAAGTGGAAGTACTTAGTTCGGTCCCGGCCCTTATTAAGTACCACGTCTTCGAGATTACTCGGGTGGGTGAG

510

LRRK2

LRRK2-201

TATGCGCCCCGAGCTGTTAGGTCCTAACTTATTAATAAAGGTACCATTAAGGCAGGGAGAAGTTTACAAGACTCATTAACT  
ATACGCGGGGCTCGACAATCCAGTGATTTGAATAATTTTTTCCATGGTAATTCCGTCCCTCTTCAAATGTTCTGAGTAAATTGA

595

LRRK2

LRRK2-201

GTATGATAAAAAGAGATATGAAAGAGACCTATTCAATTAATCAGGTGGAACATTAATAAAGCTTACATGGCAATTTAACCTTGATAA  
CATACTATTTTCTCTATACTTTCTCTGGATAAGTTAATTAGTCCACCTTGTAATTTTTCGAATGTACCGTTAAATTGGAACATT

680

LRRK2

LRRK2-201

AAATACATGGGAGAAATACAAAGGAATTTGGAAAATTCCTTTCTTGAATAAGGCATCAGTTAGCTATTCAGGTTATGAGGTTG  
TTTATGTACCCTCTTTATGTTTCTTAAACCTTTTAAGAGAAAAGGAACCTTATTCCGTAGTCAATCGATAAGTCCAATACTCCAAC

765

LRRK2

LRRK2-201

AAGGAATGTTAGGAGCTCTTTTAAAGGTGATAAAGTCAAGATAATGTTGCAGATTTTATTCTTATGTAACAAACCCCTCGAAAC  
TTCCTTACAATCCTCGAGAAAATTTCCACTATTTCAAGTTCTATTACAACGTCTAAAATAAGAATACATTGTTTGGGGGAGCTTTG

850

LRRK2

LRRK2-201

TTGGAGGCTTAAAAATGTGAACAATTTATCATTCTCTCGTTCTTCTGTGGCTTGACTGGGCTCAGCTGCGTGGTTCTGCTCCACATG  
AACCTCCGAATTTTACACTTGTTAAATAGTAAAGAGCAAGAAGACACCGAACTGACCCGAGTCGACGCACCAAGACGAGGTGTAC

935

LRRK2

LRRK2-201

GTATTGGCAAGGGTTATTCACCTTGGCTTCATTCACTAAACTGAGCTGGAAAGTGAAGAAAGGTACATGCATGTTTTTGGAGTAT  
CATAACCGTTCCCAATAAGTGAACCGAAGTAAGTAATTTGACTCGACCTTTCACGTTCTTCCATGTACGTACAAAAACCTCATA

1020

LRRK2

LRRK2-201

TGGTGCTTCTCCATGTGGCCTATCATATGGCTAAGTTGGGCTTCTCTCGTGGCACGGTGATCACAGAATAATTAGACATCTTTCAT  
ACCACGAAGAGGTACACCGGATAGTATACCGATTCAACCCGAAGGAGCACCGTGCCACTAGTGTCTTATTAATCTGTAGAAAGTA

1105

LRRK2

LRRK2-201

GGTGGCTGGTTACCAAGAGAAATGAAGCAGATTTTTTCTGTCTCTTAAAGGCTAGGCCAAGGACTGGCAAAAAATATTAATTCTG  
CCACCGACCAATGGTTCTTTACTTTCGTCTAAAAAAGACAGGAGAATTTCCGATCCGGTTCCTGACCGTTTTTATAATTAAGAC

1190

LRRK2

LRRK2-201

CTACATTCTAGTAACCAGAGCAACCACAAACCTAGCTCAGATTAAGGGGAAGGAAAAGAGACTCTATATGAATAGCACCTATGT  
GATGTAAGATCATTGGTCTCGTTGGTGTGGGATCGAGTCTAATTTCCCTTCTTTCTCTGAGATATACTTATCGTGGATACA

1275

LRRK2

LRRK2-201

ATAGGGATGGAAATGATGTGTCCATCTTTGGAACTTCCACTATAAATAGTGGTAGCACGCTATAGATCCACTAGGAAAATCAAG  
TATCCCTACCTTTACTACACAGGTAGAAAACCTTTGAAGGTGATATTTATCACCATCGTGCGATATCTAGGTGATCCTTTTAGTTC

1360

LRRK2

LRRK2-201

CACAAACTCTTTAAAAAATAAGTGTATCTTAGTAAATAGATTAGAATAACTAGATAATAATGGCTAACATACATGAGGTTAATA  
GTGTTTGAGAAATTTTTTATTACATAGAATCATTATCTAATCTTATTGATCTATTATTACCGATTGTATGTACTCCAATTAT

1445

LRRK2

LRRK2-201

TGTGCTTTTCAAAGATTAGCTCATGTAATTTCTCACAGCAACCTTTCAAATGGTACTTTATTAGCCCCTATGATACAGATGAAGA  
ACACGAAAAGTTTCTAATCGAGTACATTAAGAGTGTGCTTGGAAAGGTTTACCATGAAATAATCGGGGATACTATGTCTACTTCT

1530

LRRK2

LRRK2-201

AATTGATTGACAGAGAGGTTGAATAATTTATCCAACGGTACACATTCAGGAAGAGGTAGAGTTAGAATTTCAAACCAAGTAGTTT  
TTAACTAACTGTCTCTCCAACCTTATTAATAGGTTGCCATGTGTAAGTCTTCTCCATCTCAATCTTAAAGTTTGGTTCATCAAA

1615

LRRK2

LRRK2-201

GACTCCAGGGCCTATGAGTTTATACATTCATAGGGCTGATATTCAAATGAGAGAAGAGAAGTAATAAATAAACATATAATATGTT  
CTGAGGTCCCGGATACTCAAATATGTAAGTATCCCGACTATAAGTTTACTCTTCTCTTCTTATTATTTGTATATTATACAA

1700

LRRK2

LRRK2-201

GAGTGGTACAGAGTGCTACAAAGAAAAATATGAAGTGCAGTTGGAGATGAATTGTCAAAAAAGGTCTTAGCACTTAAAAAACACTA  
CTCACCATGTCTCACGATGTTTCTTTTATACTTCACGTCAACCTCTACTTAACAGTTTTTTTCCAGAATCGTGAATTTTTTGTGAT

1785

LRRK2

LRRK2-201

AAACAGCAAACAATTCTCTTTACCACCTAAACTGTAAGAGCGATCTGGAATTGCTATAAAGTACACAACATGGGAGAAGTCTTAA  
TTTGTGCGTTTGTAAAGAGAAAATGGTGGATTTGACATTCTCGCTAGACCTTAACGATATTTTCATGTGTTGTACCCTCTTCAGAATT

1870

LRRK2

LRRK2-201

ACAACAGTTTTTATTATTTATAGGCCCATTTGCACACTGTCATTAAATACCAATATGTTCAATCAACCATGCATTCATTGATTCAA  
TGTTGTCAAAAAATAATAAATATCCGGGTAACGTGTGACAGTAATTTATGTTTATACAAGTTAGTTGGTACGTAAGTAACTAAGTT

1955

LRRK2

LRRK2-201

TAAATACTGTACATACAAAAATAGAAAATACAGAAAATGGGTAAGACAAGTCCTTGGGCCTAAGGACTTTATAACCTGGTATTTCACT  
ATTTATGACATGTATGTTTTATCTTTATGTCTTTACCCATTCTGTTTCAGGAACCCGGATTCTGAAATATTGGACCATAAAGTGA

2040

LRRK2

LRRK2-201

CAACTACATGATAGCATAAATAATGTTTGCTTCTGTTTAAGTATTCCTTAAACATTATAGATCTCCCAAAGAAAATTAATACAA  
GTTGATGTACTATCGTATTTATTACAAACGAAGACAAATTCATAAGGAATTTGTAATATCTAGAGGGTTTCTTTTAATTTATGTT

2125

LRRK2

LRRK2-201

ACCTCTTTTTAAAGTGAATTTGACAAAGCAAATAAATTGGAATATATAGATAAATATGCTAAAATTTGTCATATGTACTTTGCG  
TGGAGAAAAATTTCACTTAAACTGTTTCGTTTTATTTAACCTTATATATCTATTTATACGATTTTAAACAGTATACATGAAACGC

2210

LRRK2

LRRK2-201

TACTTTACATGTGTTATTTTATTCTCAGGGCAATCTAAGACAGTCACTTTTTATTATCTCATTTTATAGAGAAGAAAGCTGTGCAG  
ATGAAATGTACACAATAAAGTAAGAGTCCCGTTAGATTCTGTGTCAGTGAAAATAATAGAGTAAAATATCTCTTTTCGACACGTC

2295

LRRK2

LRRK2-201

TAAAGAAATCAAATACCTTTCCCAAGGTTACAGAGCTAGTAGTAGAGCCTGGATTTGAATCTGGGTTCTGACTGATTTTTAACTG  
ATTTCTTTAGTTTATGGAAGGGTTCCAATGTCTCGATCATCATCTCGGACCTAAACTTAGACCCAAGACTGACTAAAAATTGAC

2380

LRRK2

LRRK2-201

CCATGACAAGGATCAAAGCTCAAAGTGTGATCTCTGTGTTAGAAACATCGGGGTTGCTCTTTAAAAAAGCCGATTCTCAGGCCTC  
GGTACTGTTCTAGTTTTCGAGTTTCACACTAGAGACACAATCTTTGTAGCCCCAACGAGAAATTTTTTTCGGCTAAGAGTCCGGAG

2465

LRRK2

LRRK2-201

AACCCAGACCTACTGACCCAGACACTGCAAGTAGAATCCATCAAATGCAGTAGTTACTTTGAGAATCATGAAACTCTGCTACAC  
TTGGGTCTGGATGACTGGGTCTGTGACGTTTCATCTTAGGTAGTTTTACGTCATCAATGAAACTCTTAGTACTTTGAGACGATGTG

2550

LRRK2

LRRK2-201

AGTCTGTCTTCCTATTCATGGGAAGTCCTCTCCTAGTATATAAAATGTGAAGTAATATTTCTATTTCAAACCTGTATTGATAACTGT  
TCAGACAGAAGGATAAGTACCTTCAGGAGAGGATCATATATTTTACACTTCATTATAAAGATAAAGTTTGGACATAACTATTGACA

2635

LRRK2

LRRK2-201

CTGGAAGATAATTTTCCTGGGAATATATTATTGATGAGACTGCAAAACAGATGTGAGGTATTGGATTGATCTTTCCATTGTAGCT  
GACCTTCTATTAAGGACCTTATATAAATACTACTCTGACGTTTTGTCTACACTCCATAACCTAACTAGAAAAGGTAACATCGA

2720

LRRK2

LRRK2-201

AGGGAAATACTGATGTTTCATTGTTTTCAAGTGAAGTTC AATGATTTTCTATCCGAATTAAC TCCCTTAATTTAACAATTTTTTTTTT  
TCCCTTTATGACTACAAGTAACAAAGTCACTTCAAGTTACTAAAGGATAGGCTTAATTGAGGGAATTAATTGTTAAAAA

2805

LRRK2

LRRK2-201

TTTTTTGAGAGTGAATGCCCTCTGGGCTTCTAGGCCACATGGTTGCTAGAGAAATTAGGTA CTGTGTTGCACTTGAAAACTA  
AAAAACTCTCACTTACGGGGAGACCCGAAGATCCGGTGTACCAACGATCTCTTTAATCCATGACACAACGTGAAC TTTTGTGAT

2890

LRRK2

LRRK2-201

AAATCTTTCTGACTACTTTCACTGAGCAAAGAGACATAAAATGCTTTAAATTTGCAACATTT CAGAAAAATAAATTTTAGTGATTA  
TTTAGAAAGACTGATGAAAGTGACTCGTTTTCTCTGTATTTTACGAAATTTAAACGTTGTAAAGTCTTTTATTTAAATCACTAAT

2975

LRRK2

LRRK2-201

TTTATGACTCGAATCTTTT CAGATTTTGACAGTGAAAGTGGAAGTTGTCCAAAACACCTAAGGGCATTATTTTCGCGTAGAGATG  
AAATACTGAGCTTAGAAAAGTCTAAAACGTCACTTTTACCTTCCAACAGGTTTTGTGGGATTCCCGTAATAAAGCGCATCTCTAC

3060

LRRK2

LRRK2-201

1610 I L T V K V 1615 E G C P 1620 K H P K G 1625 I I S R R 1630 D  
ENSE00003521951  
LRRK2-201

TGGAAAAATTTCTTTCAAAAAAAGGAAATTTCCAAGA AACTACATGTCACAGTATTTTAAAGTCTCTAGAAAAATTCAGATTGC  
ACCTTTTTAAAGAAAGTTTTTTTTTCTTTAAAGGTTTCTTGATGTACAGTGT CATAAAATTCGAGGATCTTTTTAAGGTCTAACG

3145

LRRK2

LRRK2-201

V E K F 1635 L S K K R 1640 F P K N 1645 Y M S Q Y 1650 F K L L E 1655 K F Q I A  
ENSE00003521951  
LRRK2-201

TTTGCCAATAGGAGAAGAATATTTGCTGGTTCCAAGCAGGTAAAGAAAACCTTAAAAAATTAATTGCTACATGGAAATTC ACTAT  
AAACGGTTATCCTCTTCTTATAAACGACCAAGGTTTCGTCCATTTCTTTTGAATTTTTTAATTAACGATGTACCTTTAAGTGATA

3230

LRRK2

LRRK2-201

1660 L P I G E 1665 E Y L L V 1670 P S S  
ENSE00003521951  
LRRK2-201

CTATTCTTTTAATTGTCAAACCTAACTGCTAGTCTATAATAGATGTATTAATAAAATAAATATATTTTTGCTTCTAGTGTAACCTCC  
GATAAGAAAATTAACAGTTTGATTGACATCAGATATTATCTACATAATTTATTTTATTTATATAAAACGAAGATCACATTTGGAGG

3315

LRRK2

LRRK2-201

LRRK2-201

TACTGACATGTATCATTATTTTTGGAATAAACATTGCATCTGACACTTTAACAATATAGTAAATCACTTACTTTATGTGTATAG  
ATGACTGTACATAGTAAATAAACCTTATTTTGTAAACGTAGACTGTGAAATTGTTATATCATTTAGTGAATGAAATACACATATC

3400

LRRK2

LRRK2-201

LRRK2-201

TTACTAGTTGGCTTATCACTGTTGAAATTATTTAAGAAAGGTAAATAGTGGAGATTAATGTGTGTGTGTGTCTGTGTTTTGTGTAT  
AATGATCAACCGAATAGTGACAACCTTAATAAATTCCTTCCATTTATCACCTCTAATTACACACACACACAGACACAAACACATA

3485

LRRK2

LRRK2-201

LRRK2-201

GTGTGTGTTCTTAAACAACACTGAGAGAGTTTATTAAGCAAGTTCTGAGAAGATAGTGAGTTTTCAACAGAATTTTAAAAGCATT  
CACACACAAGAATTTGTTGTGACTCTCTCAAATAATTCGTTCAAGACTCTTCTATCACTCAAAAGTTGTCTTAAAATTTTCGTAA

3570

LRRK2

LRRK2-201

LRRK2-201

PCR Forward

TTTTTCCTACTGCTCTAAGCAACTG

TATGGCATCACAATGGATGCCTATGTTTTAGCCTATACTATGGAAATTTTCCTACTGCTCTAAGCAACTGGGAAATTTATAAAG  
ATACCGTAGTGTTACCTACGGATACAAAATCGGATATGATACCTTTAAAAAGGATGACGAGATTGTTGACCTTTAAATATTTTC

3655

LRRK2

LRRK2-201

LRRK2-201

TAATATGATGTTGAAATGTGCAAATTACATTGATTGATGGATGCAGCCAATTTTAAAAATAAATATACACTTTTTTTCTAGGACA  
ATTATACTACAACCTTACACGTTTAATGTAACCTAACCTACGTGCGTTAAAATTTTTATTTATATGTGAAAAAAGATCCTGT

3740

LRRK2

LRRK2-201

LRRK2-201

TGTATTTTTTCAGGATTTATATAAGATTACATTTGTCTATGCATAACTAATTGTAATAATTTATGTATTAGTGACACAGGGATTACC  
ACATAAAAAGTCCTAAATATATTCTAATGTAACAGATACGTATTGATTAACATTATTTAAATACATAATCACGTGTCCCTAATGG

3825

LRRK2

LRRK2-201

LRRK2-201

GAAAAATATTTTCATGCATCTACATCTGAGCATGCATTTGAATTGGTTATTGACCACTGAATTTTTGGTGTAGGAAAAATATGTAGT  
CTTTTATAAAGTACGTAGATGTAGACTCGTACGTAAACTTAACCAATAACTGGTGACTTAAAAACCATCCTTTTTTATACATCA

3910

LRRK2

LRRK2-201

LRRK2-201

GAAACAATGTTACAAAAAGATTACAATTGTTTGGAAATGATTACCTTCATTGACTTTAAGCAGTAAAATCATTGCTCAACAAGGT  
CTTTGTTACAATGTTTTCTAATGTTAACAAACCTTACTAATGGAAGTAACTGAAATTCGTCATTTTAGTAAACGAGTTGTTCCA

3995

LRRK2

LRRK2-201

LRRK2-201

TGGGTGTTTTGTGAGGCTGTATAACCATAGTGTCTTTTTGCCTTTAGTTTGTCTGACCACAGGCCTGTGATAGAGCTTCCCCATT  
ACCCACAAAACACTCCGACATATTGGTATCACAGGAAAACGGAATCAAACAGACTGGTGTCCGGACACTATCTCGAAGGGGTAA

4080

LRRK2

LRRK2-201

L S D H R P V I E L P H  
ENSE00003579735

LRRK2-201

GTGAGAACTCTGAAATTATCATCCGACTATATGAAATGCCTTATTTTCCAATGGGATTTTGGTCAAGATTAATCAATCGATTACT  
CACTCTTGAGACTTTAATAGTAGGCTGATATACTTTACGGAAATAAAGGTTACCCTAAAACAGTTCTAATTAGTTAGCTAATGA

4165

LRRK2

LRRK2-201

1685 1690 1695 1700 1705 1710  
C E N S E I I I R L Y E M P Y F P M G F W S R L I N R L L  
ENSE00003579735

LRRK2-201

Donor Template WT -> SNV

PAM gRNA Protospacer

SNV

TAATAGTAGGCTGATATACTTTACGGAAATAAAGGTTACCCTAAAACAGTTCTAATTAGTTAGCTAATGA  
Donor Template WT -> SNV

ATAAAGGTTACCCTAAAAC  
gRNA Protospacer

TGAGATTTACCTTACATGCTTTTCAGGGAGAGGTAAGTATCTAATGAAGACTTATTAGATTTTTAGAGACTATTAATTTAGACTT  
ACTCTAAAGTGGAATGTACGAAAAGTCCCTCTCCATTCATAGATTACTTCTGAATAATCTAAAAATCTCTGATAATTAATCTGAA

4250

LRRK2

LRRK2-201

1715 1720  
E I S P Y M L S G R  
ENSE00003579735

LRRK2-201

Donor Template WT -> SNV

ACTCTAAAGTGGAATGTACGAAAAGTCCCT  
Donor Template WT -> SNV

ATTAATTTTTAGAGAAATTAGGGAGATGGCATATGAAAAGTAATATGCCATTTTCTCAGAGTTTACTTGTGGAAAGGCAGCTGA  
TAATTAATAATCTCTTTAATCCCTCTACCGTATACTTTTTATTATACGGTAAAAGAGTCTCAAATGAACAAACCTTCCGTCGACT

4335

LRRK2

LRRK2-201

LRRK2-201

GAACAAACCTTCCGTCGACT  
Sanger Sequencing Primer

AGAATTAGAAAATAAGCTCATAAACCTTGGAGTAGGCAATCTAAAGACACACAAGCACATATAACCTCATCTAATTTGTCAGGA  
TCTTAATCTTTTATTTCGAGTATTTTGGAACTCATCCGTTAGATTTCTGTGTGTTCTGTGTATATTGGAGTAGATTAAACAGTCCT

4420

LRRK2

LRRK2-201

LRRK2-201

AGAAAATTCCTTAGGTGCTCACTCAGATCTTGACTGTGATTACATTGTAGGGACTGTAATTATCTCTTTTTCTGTTGCACAGCCAC  
TCTTTAAGGAATCCACGAGTGAGTCTAGAACTGACACTAATGTAACATCCCTGACATTAATAGAGAAAAGACAACGTGTCGGTG

4505

LRRK2

LRRK2-201

LRRK2-201

TAAGACATTTACAAAAAAGAGCAAATCCGGTGTTTATAATGCTAACTCTTTCTTCTAAAAATAAATAGAGACATTTTGGTACTCC  
ATTCTGTAATGTTTTTTCTCGTTTAGGCCACAAATATTACGATTGAGAAAGAAGATTTTATTTATCTCTGTAACCATGAGG

4590

LRRK2

LRRK2-201

LRRK2-201

CTCGTTTAGGCCACAAATATTACGA  
PCR Reverse

AAAGGGAAAATATCATTTTGGGGATTAAAATTAGCTTTACACAGGTGTTACTGGTTTCCAAAATAAACCTTACCTTGATTGGAAT  
TTTCCCTTTTATAGTAAAACCCCTAATTTAATCGAAATGTGTCCACAATGACCAAAGGTTTTATTTGGAATGGAACCTAACCTTA

4675

LRRK2

LRRK2-201

LRRK2-201

TAATCAACATATAGGTAGTTACATTGCATTA AAAAGTTTCAGAAAGTTTTGCGTTTAGCATGATCAAAAACCTTCTTTTTAAAAATT  
ATTAGTTGTATATCCATCAATGTAACGTAATTTTCAAGTCTTTCAAACGCAAATCGTACTAGTTTTTGAAGAAAAATTTTTAA

4760

LRRK2

LRRK2-201

LRRK2-201

ATGAGGATTTATTTATGATTTTCTTTCTTCATCTGTCGAGCATATTA AACTGCTTAACAGCATCAACCTGAAATGGATCTTAATG  
TACTCCTAAATAAATACTAAAAGAAAGAAGTAGACAGCTCGTATAATTTGACGAATTGTCGTAGTTGGACTTTACCTAGAATTAC

4845

LRRK2

LRRK2-201

LRRK2-201



TGCAGGGGATTTAACTCTTTTTATTGTAAAGTTGTGGATAAAAATATTTAATAGATATGGATGAGGACTCATATCAGTAACAACCC  
ACGTCCCCTAAATTGAGAAAAATAACATTTCAACACCTATTTTTATAAATTATCTATACCTACTCCTGAGTATAGTCATTGTTGGG

4930

LRRK2

LRRK2-201

LRRK2-201

AATACTTTATTTCAAATGAATAGATCTGTATTACAATCACTTGTGTTGTGTGCAGTAGATTTTTTCCCTTTAACTTAGGAAGCA  
TTATGAAATAAAGTTTTACTTATCTAGACATAATGTTAGTGAACACAACACACGTCATCTAAAAAAGGGAAATTGAATCCTTCGT

5015

LRRK2

LRRK2-201

LRRK2-201

GTTAATAATTAATGGCTCCATTTTTTGAACGAGCACTTCGCCCAAACAGAATGTATTGGCGACAAGGCATTTACTTAAATTGGT  
CAATTATTAATTACCGAGGTAATAAATCTTGCTCGTGAAGCGGGTTTGTCTTACATAACCGCTGTTCCGTAAATGAATTTAACCA

5100

LRRK2

LRRK2-201

E R A L R P N R M Y W R Q G I Y L N W  
ENSE00003635411

LRRK2-201

CTCCTGAAGCTTATTGTCTGGTAGGATCTGAAGTCTTAGACAATCATCCAGAGAGTTTCTTAAAAATTACAGTTCCTTCTTGTAG  
GAGGACTTCGAATAACAGACCATCCTAGACTTCAGAATCTGTTAGTAGGTCTCTCAAAGAATTTTTAATGTCAAGGAAGAACATC

5185

LRRK2

LRRK2-201

S P E A Y C L V G S E V L D N H P E S F L K I T V P S C R  
ENSE00003635411

LRRK2-201

AAAAGGTAAGGAAATCAATTTGAATGTTTTCAATTGCAACACTAAAGAAATTTAACTTAAAAAAAAAAAAAAAAACTTTACCTTAAA  
TTTTCCATTCTTTAGTTAAACTTACAAAAGTTAACGTTGTGATTTCTTTAAATTTGAATTTTTTTTTTTTTTTTGAATGGAATTT

5270

LRRK2

LRRK2-201

K  
ENSE...

LRRK2-201

GCTTTGCGACAGTATGAGGTTTAGACAAGGTGTTGAGCTCTGTTTTGAATCATGTAGGCTGTATTCTTTTGGGCCAAGTTGTGGA  
CGAAACGCTGTCATACTCCAAATCTGTTCCACAACCTCGAGACAAAACCTTAGTACATCCGACATAAGAAAACCCGGTTCAACACCT

5355

LRRK2

LRRK2-201

G C I L L G Q V V D  
ENSE00003568150

LRRK2-201

CCACATTGATTCTCTCATGGAAGAATGGTTTCTGGGTTGCTGGAGATTGATATTTGTGGTGAAGGAGAAAACCTCTGTTGAAGAAA  
GGTGTAACTAAGAGAGTACCTTCTTACCAAAGGACCCAACGACCTCTAACTATAAACACCACTTCTCTTTGAGACAACCTTCTTT

5440

LRRK2

LRRK2-201

H I D S L M E W F P G L L E I D I C G E G T L L K K  
ENSE00003568150

LRRK2-201

TGGGCATTATATAGTTTTAATGATGGTGAAGAACATCAAAAAATCTTACTTGATGACTTGATGAAGAAAGCAGAGGAAGGTATGT  
ACCCGTAATATATCAAAAATTACTACCACCTTCTTGTAGTTTTTTAGAAATGAACTACTGAACTACTTCTTTTCGTCTCCTTCCATACA

5525

LRRK2

LRRK2-201

W A L Y S F N D G E E H Q K I L L D D L M K K A E E

ENSE00003568150

LRRK2-201

TTTGATACAACCTTACAAATGCTTTTTAAGTGATCCTTCAATACTTATGAAGTGACTTTTTAATAAATGTAAATATTCTTATCCATAA  
AAACTATGTTGAATGTTTACGAAAATTCCTAGGAAGTTATGAATACTTCACTGAAAATTATTTACATTTATAAGAATAGGTATT

5610

LRRK2

LRRK2-201

LRRK2-201

GGGATGAGTTGAAAAATAGTATATTCAATTATAGGGACAGTTCAGAAAACCTGAATTATATTTATTACCAATAAAAATCTTGTATTC  
CCCTACTCAACTTTTTATCATATAAGTTAATATCCCTGTCAAGTCTTTTTGACTTAATATAAATAATGGTTATTTTTAGAACATAAG

5695

LRRK2

LRRK2-201

LRRK2-201

TAGATTCAGAAAATGTTGATTTGAGGGTTTGAATGCTGGCTTATTGAGCAACATAACCTCATCTGTGAAACCGGAATACCAACCA  
ATCTAAGTCTTTTTACAACATAAACTCCCAAACCTTACGACCGAATAAAGTTCGTTGATTGGAGTAGACACTTTGGCCTTATGGTTGGT

5780

LRRK2

LRRK2-201

LRRK2-201

CATCTATCTCATAGAAGTGTATAAAGATTCAAATAGACAATACATGGACCTAATTTACCAACATGTCTGCCATATAATAACAGC  
GTAGATAGAGTATCTTGACAATATTTCTAAGTTTATCTGTTATGTACCTGGATTAAATGGTTGTACAGACGGTATATTATTGTCG

5865

LRRK2

LRRK2-201

LRRK2-201

TGCAGCTTCATGAATGTGGCAAAAGCAGAGAGTAGATAACTTTCTAGTCAGATGTCTGGTAGTCTGCAGCAGTTCAGAATTCTAC  
ACGTCGAAGTACTTACACCGTTTTTCGTCTCTCATCTATTGAAAGATCAGTCTACAGACCATCAGACGTCGTCAAGTCTTAAGATG

5950

LRRK2

LRRK2-201

LRRK2-201

AAGTGAACGTAGGAATAAGTTTTTAAAATTTCCAAGTAGATAGATACTAAGTGAATCTTTAAAATGTTCTCAAATTTCTAGAGAA  
TTCACTTGCATCCTTATTCAAAAATTTTAAAGTTTCATCTATCTATGATTCACCTTAGAAAATTTTACAAGAGTTTTAAAGGATCTCTT

6035

LRRK2

LRRK2-201

LRRK2-201

ATATAGGATTGGTTAGAAAAGGGAGGGATTAGAAATTATAGAAAATATTCCATTATTTTTTTCACATCAAAAACCACAAATTTATGTA  
TATATCCTAACCAATCTTTCCCTCCCTAATCTTTAATATCTTTTATAAGGTAATAAAAAAGTGTAGTTTTGGTGTTTAAATACAT

6120

LRRK2

LRRK2-201

LRRK2-201

TCTCCTTAAATGTTGTTTTTATTTAAAAAATGTTTTATTACTTCTCAGGAGATCTCTTAGTAAATCCAGATCAACCAAGGCTCAC  
AGAGGAATTTACAACAAAAATAAATTTTTTACAAAATAATGAAGAGTCCTCTAGAGAATCATTTAGGTCTAGTTGGTTCCGAGTG

6205

LRRK2

LRRK2-201

G D L L V N P D Q P R L T  
ENSE00003468154

LRRK2-201

CATTCCAATATCTCAGATTGCCCTGACTTGATTTTTGGCTGACCTGCCTAGAAATATTATGTTGAATAATGATGAGTTGGAATTT  
GTAAGGTTATAGAGTCTAACGGGGACTGAACTAAAACCGACTGGACGGATCTTTATAATACAACCTTATTACTACTCAACCTTAAA

6290

LRRK2

LRRK2-201

I P I S Q I A P D L I L A D L P R N I M L N N D E L E F  
ENSE00003468154

LRRK2-201

GAACAAGCTCCAGAGTTTCTCCTAGGTAATTCTTTTTGTTAATTTGAGAATAAAAAATTAGGATGTAATTTTTCTCCTTATAATTTA  
CTTGTTTCGAGGTCTCAAAGAGGATCCATTAAGAAAAACAATTAACCTCTTATTTTTAATCCTACATTAAGAGGAATATTAAT

6375

LRRK2

LRRK2-201

E Q A P E F L L G N S F C  
ENSE00003468154

LRRK2-201

GAAAATAGATTTTCATAATTATATTGTCATAGATTTTACTGTCTTCATATATTTGTTATAATTTTTGTAATTTGGAATGATATATTT  
CTTTTATCTAAAGTATTAATATAACAGTATCTAAAATGACAGAAGTATATAAACAATATTA AAAACATAAACCTTACTATATAAA

6460

LRRK2

LRRK2-201

TAAAGGAATATAATATTACAGATCTGGAATTTGTTTTGCACATAATCATGTAGACTAGGATCAAGATGAGGATGAGATTATCATG  
ATTTCTTATATTATAATGTCTAGACCTTAAACAAAACGTGTATTAGTACATCTGATCCTAGTTCTACTCCTACTCTAATAGTAC

6545

LRRK2

LRRK2-201

GAAGCAGAAATATTTATGAAATATATCTTTGTATTTGCCTTAATTGCCAGGGATATGGGAGGCAAATAAGACAGTTTTTCAGGTGA  
CTTCGTCTTTATAAATACTTTATATAGAAACATAAACGGAATTAACGGTCCCTATACCCTCCGTTTATTCTGTCAAAAAGTCCACT

6630

LRRK2

LRRK2-201

GTAAAGTGAAGCAGCCATATTTTATAAAAATGACAGAATAGGTAAAGGAAGCACACCTCAGTGTAGCCATAGCAGGGGTTTTATGA  
CAATTCACTTCGTCGGTATAAAAATTTTTACTGTCTTATCCATTTCTTCGTGTGGAGTCCACATCGGTATCGTCCCAAAAATACT

6715

LRRK2

LRRK2-201

CTCAGTGTGACAATGCTGAATTCTCATAGAAATATTCATTAAGGCTTGAATTAAGTCAAAAAGTGTACATGGTGACATACT  
GAGTCACACTGTTACGACTTAAGAGTATCTTTATAAGTAATTTTCGGAACCTTAATTTTCAGTTTTTACAATGTACCACTGTATGA

6800

LRRK2

LRRK2-201

CAAATACTTTTTTTTTTTTTTTTTGATATGCTGAACAATTTACATTTCTTGGTTCCGTGAATTCATCAGTGATTTTTCAGTAGAGT  
GTTTATGAAAAAAAAAAAAAAAAAACTATACGACTTGTTAAATGTAAAGAACCAAGGCACCTAAGTTAGTCACTAAAAGTCATCTCA

6885

LRRK2

LRRK2-201

ATGATGGAAATCATTGAATTCATGTAGCATGTTTAGGTGCTCATTGAGAAAAGGTGAAGTCATGGTAACCATGTTTCAATATTCT  
TACTACCTTTAGTAACTTAAGTACATCGTACAAATCCACGAGTAACTCTTTTCCACTTCAGTACCATTGGTACAAAAGTTATAAGA

6970

LRRK2

LRRK2-201

CATTTGTATCTTGACTTCCTGCACATGGATTTTTGGGCCTAAAAGATGTTTTTAAAACATGCTCATACTTCAGAAGATGAAAA  
GTAAACATAGAAGTGAAGGACGTGTACCTAAAAACCCGGATTTCTACAAAAATTTGTACGAGTATGTGAAGTCTTCTACTTTTT

7055

LRRK2

LRRK2-201

GTGTATGCATTATAACTACTTTGGGAAAGAAACAGTCAACATATGTTACTGTATGTCATTCTGTAGATTACATGTGTGGTTTCTC  
CACATACGTAATATTGATGAAACCTTTCTTTGTCAGTTGTATACAATGACATACAGTAAGACATCTAATGTACACACCAAAGAG

7140

LRRK2

LRRK2-201

ATGTCTCTCAGAATAAAAGCTAATGTCTTTACAAGACCTGCGATGCTGTGATCTGTCTGGCTCCTCGGTTATCATTTTTAAAAA  
TACAGAGAGTCTTATTTTCGATTACAGAAATGTTCTGGACGCTACGACACTAGACAGACCGAGGAGCCAATAGTAAAAATTTTTT

7225

LRRK2

LRRK2-201

AGATATACTTTGTACAAATTTTTTAATTGACAAGTAAAAATTGTATATATTTATGGTGTACAACATGATGTTTTGATATATGTA  
TCTATATGAAACATGTTTTAAAAAAATTAAGTCTTTTAAACATATATAAATACCACATGTTGTACTACAAAACATATATACAT

7310

LRRK2

LRRK2-201

TATGTTGTGGAATGGAGAAGTTTTAGCTATTTAACATATACATTATCTCAAAATTTTATGTGGTGAGAAGTATTAATCTACTCT  
ATACAACACCTTACCTCTTCAAATCGATAAATTGTATATGTAATAGAGTTTATAAATACACCACTCTTGATAATTTTAGATGAGA

7395

LRRK2

LRRK2-201

CATAGCAATTTACAAGTATACAGTATGTTATTATTAAGTGTAGGCTGACATACTCAAGTTTTAAACATTCCTGAGAGTCATTGGG  
GTATCGTTAAATGTTTCATATGTCATACAATAATAATTGACATCCGACTGTATGAGTTCAAAATTTGTAAGGACTCTCAGTAACCC

7480

LRRK2

LRRK2-201

ACAACATGAAATGCATTAGATTGATTTAATATAAAGCATTTGAAGACAATTTGACCTTACTTTGTTTGTAGTTTTGTTGTTGTT  
TGTTGATACTTTACGTAATCTAACTAAATTATTTTCGTAAACTTCTGTTAAACTGGAATGAAACAAATCAAAAAACAACAACAA

7565

LRRK2

LRRK2-201

GTGTGTATACATTTAATTTTAAATCAAATTACCCAGAAATAATGCCTAAGATCTGTTCAGTCAGGACATAATATTATTAGCAAAAA  
CACACATATGTAAATTTAAATTTAGTTTAAATGGGGTCTTTATTACGGATTCTAGACAGTCAGTCCTGTATTATAATAATCGTTTTT

7650

LRRK2

LRRK2-201

GTTGTCCAAAATTTGAGACATGATATTTAAAGCTAAATAAACTCCTTTATACCCCTCTTATTGGCATTGATTGGGAAGTTTAGGT  
CAACAGGTTTTAAACTCTGTACTATAAAATTTGATTTATTTGAGGAAATATGGGGAGAATAACCGTAACTAACCTTCAAATCCA

7735

LRRK2

LRRK2-201

TGAATTTAAATGCTTTGGAAGTCAGGAAGTTAATGTATTAGTAATAGTGGGTAAACATAAAATGCTGAATTGTCTTGCTGAATC  
ACTTAAATTTACGAAACCTTGAGTCCTTCAATTACATAATCATTATCACCAATTGTATTTTACGACTTAACAGGAACGACTTAG

7820

LRRK2

LRRK2-201

CTACATCTTAACCCAGACTTCAAGGTATACAGGAAAGTACCAGACATGGTGCATCCTTCTCTGAAGAAATCCCAAACGTGCAG  
GATGTAGAATTGGGGTCTGAAGTTCCATATGTCCTTTTCATGGTCTGTACCACGTAGGAAGGAGACTTCTTTAGGGTTTGACAGTC

7905

LRRK2

LRRK2-201

ACACAGATCCCTAAAATATTTCTTTTTCTGCATTAAAATGTGTTTCAGATGAATGGACACGTTTTGAGTAGTGTATGTGGAAAC  
TGTGTCTAGGGATTTTATAAAGAAAAAGGACGTAATTTTACACAAAGTCTACTTACCTGTGCAAAAACCATCACATACACCTTTG

7990

LRRK2

LRRK2-201

GTCATTTACAAAGTCTGTTTAGTTGGCCAGGTGTAGTAGCTCACTCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGTGTAT  
CAGTAAATGTTTCAGACAAATCAACCGGTCCACATCATCGAGTGAGGACATTAGGGTCTGTGAAACCTCCGGCTCCACCCACATA

8075

LRRK2

LRRK2-201

CACGAGGTCAGGAGTTGAAGACCAGCCTGACCAAGATGGTGAAACCTCATCTCTACTAAAAATACAAAAAATTAAGTGGGTGTG  
GTGCTCCAGTCCTCAACTTCTGGTCCGACTGGTTCTACCACTTTGGAGTAGAGATGATTTTTATGTTTTTTAATTGACCCACAC

8160

LRRK2

LRRK2-201

GTGGTGGGCATCTGTAATCTCAGCTACTCGGGAGGCTGAGGCAGAGAATTGCTTGAACCTGGGAGGCCGAGGTTGCAGTGAGCCG  
CACCACCCGTAGACATTAGAGTCGATGAGCCCTCCGACTCCGTCTCTTAACGAACCTGGACCTCCGCTCCAACGTCACTCGGC

8245

LRRK2

LRRK2-201

AGGTTGTGCCACTGCACTCCAGCCTAGGCGACAGAGCGTCTCAAAACAAAAACAAAAACAAAAAAGCAAAGTCTGTTTAG  
TCCAACACGGTGACGTGAGGTCGGATCCGCTGTCTCGCAGAGTTTTGTTTTGTTTTGTTTTTTCGTTTCAGACAAATC

8330

LRRK2

LRRK2-201

CTACCCATATAGGAAAATGTTTGTGATTACTCTCCCTTCTCTAGACCCATGTCCCATAAATCCATAAATCCCATGTTTCATTTACA  
GATGGGTATATCCTTTTACAAACACTAATGAGAGGGAAGAGATCTGGGTACAGGGTATTTAGGTATTTAGGGTACAAGTAAATGT

8415

LRRK2

LRRK2-201

GAAAGCAGTCTAGATAGGAGTTTCTCAGTCTTTGAGCTGTTGCCATTTTGGCTTGGATAACTAACTCTTTCTTATCGAGGGTCAT  
CTTTTCGTCAGATCTATCCTCAAAGAGTCAGAAACTCGACAACGGTAAACCGAACCTATTGATTGAGAAAGAATAGCTCCCAGTA

8500

LRRK2

LRRK2-201

CCTGTGCACTGCAGAATGTTTGGCAGCATCTCTGTCTATCCACTAGATGTCAGTAGTATCTCCCCTTCCCTCAGATGTGACAATC  
GGACACGTGACGTCTTACAAACCGTCGTAGAGACAGATAGGTGATCTACAGTCATCATAGAGGGGAAGGGAGTCTACACTGTTAG

8585

LRRK2

LRRK2-201

AAAAATGTCTCCGGATGTTGCCAAAGATAAGGGGTGGGGTTGAATACCAGTGATTTAAACAAATTAGGTGTATCCTTCTAAAAAC  
TTTTTACAGAGGCCTACAACGGTTTCTATTCCCCACCCCAACTTATGGTCACTAAATTTGTTTAAATCCACATAGGAAGATTTTTG

8670

LRRK2

LRRK2-201

ATTTTACAGGTAGCGACTCCAGCATCTTTATATTAGAGTAATCTGGAGAAGGTTATGCCTCTCTCAATTTTCCCTCTTTCCATTT  
TAAAAATGTCCATCGCTGAGGTCGTAGAAATATAATCTCATTAGACCTCTTCCAATACGGAGAGAGTTAAAAGGGAGAAAGGTAAA

8755

LRRK2

LRRK2-201

TTATTTGTAGGGCAGCAATGCATTCAGGCTTTTGGTAACTCTTTTTCCCAAGATAGCAGTAACTATTATGCAGTGAGTAATACGA  
AATAAACATCCCGTCGTTACGTAAGTCCGAAAACCAATTGAGAAAAAGGGTTCTATCGTCATTGATAATACGTCACCTCATTATGCT

8840

LRRK2

LRRK2-201

CCCACCTTAATAGATATGAATAGACTTGTTTTGTGAATATATTTTAAAAATATAAATGTATGGGATTCTGTTTCATGCGTCTGAGAA  
GGGTGGAATTATCTATACTTATCTGAACAAAAACACTTATATAAAATTTTATATTTACATACCCTAAGACAAGTACGCAGACTCTT

8925

LRRK2

LRRK2-201

GCCACAGGGTACATTTCCCTCTTTGTGGAGCTATTTATTTTTCTGGAGAGCCAAGACAGGTATTTCCACTTCAGTGGTGTGATTTG  
CGGTGTCCCATGTAAAGGAGAAACACCTCGATAAATAAAAGACCTCTCGGTTCTGTCCATAAAGGTGAAGTCACCACACTAAC

9010

LRRK2

LRRK2-201

AGGGGTTAGGAAAAATTTCCCTTGCCTTCAATTTTCTTTCCAACCTAGATGTCACAAATACATAATAGTAGTCCTTAACTTTATTTT  
TCCCCAATCCTTTTAAAGGAACGGAAGTTAAAAGAAAGGTTGGATCTACAGTGTTTATGTATTATCATCAGGAATTGAAATAAAA

9095

LRRK2

LRRK2-201

TGTTTTCAGTCACCTGAAAAGACATGACAATCCATACTCCATATTAATGCAGCGGCGATTCTCAAATAGAGAAGGGCTTTAAAAAA  
ACAAAAGTCAGTGGAATTTCTGTACTGTTAGGTATGAGGTATAATTACGTCGCCGCTAAGAGTTTATCTCTTCCCGAAATTTTTT

9180

LRRK2

LRRK2-201

TTAGAAATCTCTGCCGGGCGCAGTGCTCATGCCTGTAATCTCAACACTTTGGGAGGCCGAGATGGGCGGATCATGAGGTCAGGA  
AATCTTTAGAGACGGCCCGCTCACCGAGTACGGACATTAGAGTTGTGAAAACCTCCGGCTCTACCCGCCTAGTACTCCAGTCTCT

9265

LRRK2

LRRK2-201

GATCGAGACCATCCTGGCTAACACGGTGAAACCCCATCTCTACTAAAAATACAAAAAATTAGCCAGGCGTGTTGGTGTGGGCGGC  
CTAGCTCTGGTAGGACCGATTGTGCCACTTTGGGGTAGAGATGATTTTTATGTTTTTTAATCGGTCCGCACCACCACACCCGCGC

9350

LRRK2

LRRK2-201

TGTAGTCCCAGCTACTCGGGAGGCTGAGTCAGGAAAATGGCATGAACCTGGGAGGCGGAGCTTGCAGTGAGCCGAGATCGCGCCA  
ACATCAGGGTTCGATGAGCCCTCCGACTCAGTCTTTTACCGTACTTGGACCCTCCGCCTCGAACGTCACTCGGCTCTAGCGCGGT

9435

LRRK2

LRRK2-201

CTGCACTCCAGCCCAGGCGACAGAGCGAGACTCTGTCTCAAAAAAAAAAAGAAAAAAAAAAGAAAAAAAAACAACCTAGAAGTC  
GACGTGAGGTCGGGCCCGCTGTCTCGCTCTGAGACAGAGTTTTTTTTTTTTCTTTTTTTTTTTCTTTTTTTTTTTGTTGATCTTCAG

9520

LRRK2

LRRK2-201

CCTACTCCAACCTTGAAATTTGGATGTATCTCCCTAGAGTATGTTTTCTTCTCTATGCTGCATTGCAATTTTTCTTTGTTGTTGATA  
GGATGAGGTTGAACTTTAAACCTACATAGAGGGATCTCATACAAAGAAGAGATACGACGTAACGTTAAAAAGAAACAACACTAT

9605

LRRK2

LRRK2-201

GTTGTCCAGATTGAGGGGAGGCAGAACAAGATGCATCTATATGTTTCCATCTCTCCGACCGATTCTCTCCCTTCCCCTCTACTT  
CAACAGGTCTAACTCCCCTCCGTCTTGTCTACGTAGATATACAAAGGTAGAGAGGCTGGCTAAGAGAGGGGAAGGGGGAGATGAA

9690

LRRK2

LRRK2-201

GCTTTCTTTCTTTTTCCCTCTTCTGTTTACCCGATTCTATTTCTGATTCCAGTATGTAACAGTTCCTCTGAAGCTCTCTCAAT  
CGAAAAGAAAGAGAAAAAGGGAGAAGACAAATGGGCTAAGATAAAGACTAAGGTCATACATTGTCAAGGGAGACTTCGAGAGAGTTA

9775

LRRK2

LRRK2-201

ACCAACAATCCTAACTAATGGTTTTTAAAAGTCAAATATTAAGTACTGGAGGGATAGAATGAGAGAATACCAAGACTGATAAGAT  
TGGTTGTTAGGATTGATTACCAAAAATTTTTCAGTTTATAATTCATGACCTCCCTATCTTACTCTCTTATGGTTCTGACTATTCTA

9860

LRRK2

LRRK2-201

GCAAATAACTTTTTAACATATTTACAATCTAATAGAAAACAAGACATGCTCAAATAAGTTAATTATTTTTAATACTCTCTCT  
CGTTTATTATGAAAATTGTATAAATGTTAGATTATCTTTATGTTCTGTACGAGTTTATTCAATTAATAAAATTATATGAGAGAGA

9945

LRRK2

LRRK2-201

GAGCATAAAATATAATTATATATGCTCATTATAGACATATAAAAAATAAATAGGTAGAGGCTTTCCATAGATGTGTAATTTACC  
CTCGTATTTTATATTAATATATACGAGTAATATCTGTATATTTTTTATTTATCCATCTCCGAAAGGTATCTACACATTAAGTGG

10,030

LRRK2

LRRK2-201

ACTTGAAAATTACTATATTTTCTTATAGACTGTTTTGTGTGATTC  
TGAACTTTTAATGATATAAAGGAATATCTGACAAAACACACATAAG

3'

10,076

5'

LRRK2

LRRK2-201

Feature	Location	Size		Type
<b>LINC02471</b>	1 .. 10,076	10,076 bp	■ →	gene
/note	= gene <a href="#">ENSG00000223914</a> lncRNA			
✓ <b>LRRK2</b>	1 .. 10,076	10,076 bp	■ →	gene
/note	= gene <a href="#">ENSG00000188906</a> Protein coding			
<b>LINC02471-202</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000641941</a> lncRNA			
✓ <b>LRRK2-201</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000298910</a>			
<b>LRRK2-204</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000430804</a> Nonsense mediated decay			
<b>LRRK2-206</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000479187</a> Retained intron			
<b>LRRK2-210</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000679360</a> Nonsense mediated decay			
<b>LRRK2-211</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000679532</a> Nonsense mediated decay			
<b>LRRK2-213</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000680018</a> Nonsense mediated decay			
<b>LRRK2-215</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000680422</a> Nonsense mediated decay			
<b>LRRK2-216</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000680425</a> Nonsense mediated decay			
<b>LRRK2-217</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000680453</a> Nonsense mediated decay			
<b>LRRK2-218</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000680790</a>			
<b>LRRK2-219</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000681136</a> protein_coding_CDS_not_defined			
<b>LRRK2-220</b>	1 .. 10,076	10,076 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000681696</a>			
<b>LRRK2-207</b>	1 .. 3071	3071 bp	■ →	prim_transcript
/note	= primary transcript <a href="#">ENST00000481256</a> protein_coding_CDS_not_defined			
✓ <b>LRRK2-201</b>	2997 .. 6315	3319 bp	■ →	CDS
▶ 5 segments = 829 bp				
/note	= coding sequence <a href="#">ENSP00000298910</a>			
/translation	= ILTVKVEGCPKHPKGIISRRDVEKFLSKRKFPPKNYMSQYFKLLEKFQIALPIGEEYLLVPSS,,LSDHRPVIELPHCENSEIIRLYEMPYPFMGF WSRLINRLLLEISPYMLSGR,,ERALRPNRMWRQGIYLNWSPEAYCLVGSEVLDNHPESFLKITYPSCRK,,GCILLGQVVDHIDSLMEEWFPGLL EIDICGEGETLLKKWALYSFNDGEEHQKILLDDLMKKAEE,,GDLLVNPDPRLTIPISQIAPDLILADLPRNIMLNNDLEFEQAPEFLL 276 amino acids = 32.1 kDa			



Feature	Location	Size		Type
<b>LRRK2-218</b>	2997 .. 6315	3319 bp	 →	CDS
▶ 5 segments = 829 bp				
/note	= coding sequence <a href="#">ENSP00000505335</a>			
/translation	= ILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEEYLLVPSS,,LSDHRPVIELPHCENSEIIIRLYEMPYPFMGF WSRLINRLLLEISPYMLSGR,,ERALRPNRMYWRQGIYLNWSPEAYCLVGSEVLDNHPESFLKITVPSCRK,,GCILLGQVVDHIDSLMEEWFPGLL EIDICGEGETLLKKWALYSFNDGEEHQKILLDDLMKKAEE,,GDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDLEFEQAPEFLL 276 amino acids = 32.1 kDa			
<b>LRRK2-220</b>	2997 .. 6315	3319 bp	 →	CDS
▶ 5 segments = 829 bp				
/note	= coding sequence <a href="#">ENSP00000505871</a>			
/translation	= ILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEEYLLVPSS,,LSDHRPVIELPHCENSEIIIRLYEMPYPFMGF WSRLINRLLLEISPYMLSGR,,ERALRPNRMYWRQGIYLNWSPEAYCLVGSEVLDNHPESFLKITVPSCRK,,GCILLGQVVDHIDSLMEEWFPGLL EIDICGEGETLLKKWALYSFNDGEEHQKILLDDLMKKAEE,,GDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDLEFEQAPEFLL 276 amino acids = 32.1 kDa			
✓ <b>Donor Template WT -&gt; SNV</b>	4095 .. 4194	100 bp	 ⇄	misc_feature
✓ <b>PAM</b>	4119 .. 4121	3 bp	 ⇄	misc_feature
✓ <b>gRNA Protospacer</b>	4122 .. 4141	20 bp	 ⇄	misc_feature
✓ <b>SNV</b>	4123 .. 4123	1 bp	 ⇄	misc_feature
/note	= WT = A SNV = G			

Primer	Length	Binding Sites	Tm	Date Added
✓ <b>PCR Forward</b>	25-mer	3617 .. 3641	57°C	Oct 30, 2023
/sequence	=	TTTTTCCTACTGCTCTAAGCAACTG 40% GC / 7558.0 Da		
✓ <b>Donor Template WT -&gt; SNV</b>	100-mer	4095 .. 4194	70°C	Oct 30, 2023
/sequence	=	TCCCTGAAAGCATGTAAGGTGAAATCTCAAGTAATCGATTGATTAATCTTGACCAAATCCCATTGGAAAACAAGGCATTTTCATATAG 35% GC / 10488.3 Da		
✓ <b>gRNA Protospacer</b>	20-mer	4122 .. 4141	48°C	Oct 30, 2023
/sequence	=	CAAAATCCCATTGGAAAATA 30% GC / 6102.1 Da		
✓ <b>Sanger Sequencing Primer</b>	20-mer	4316 .. 4335	58°C	Oct 30, 2023
/sequence	=	TCAGCTGCCTTCCAAACAAG 50% GC / 6046.0 Da		
✓ <b>PCR Reverse</b>	25-mer	4525 .. 4549	58°C	Oct 30, 2023
/sequence	=	AGCATTATAAACACCGGATTTGCTC 40% GC / 7625.0 Da		