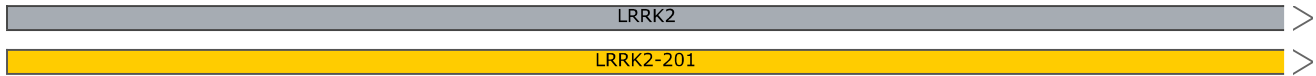
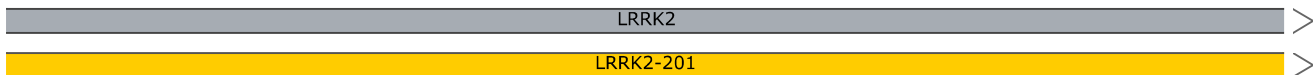


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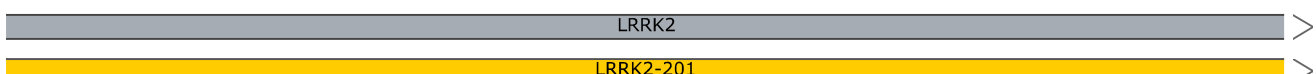
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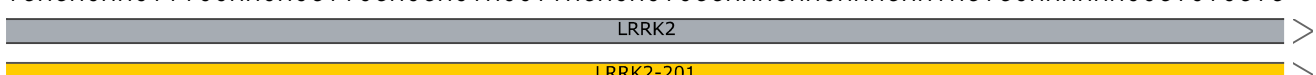
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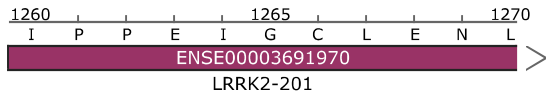
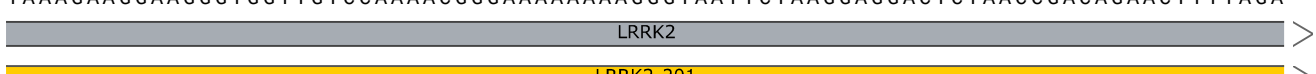
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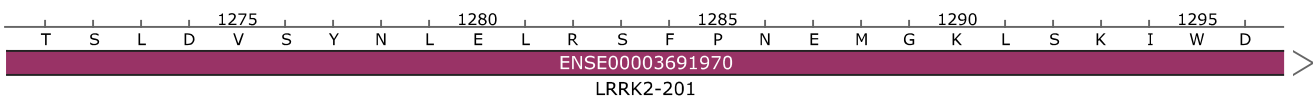
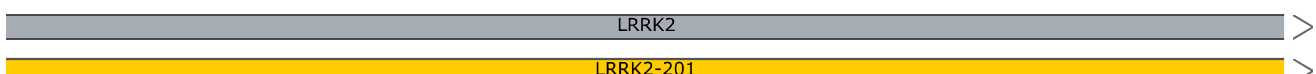
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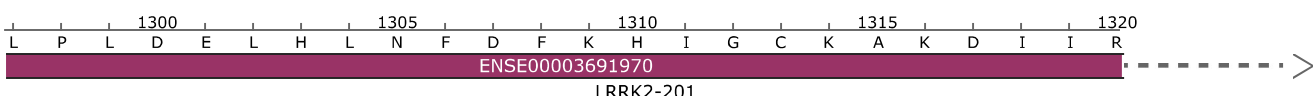
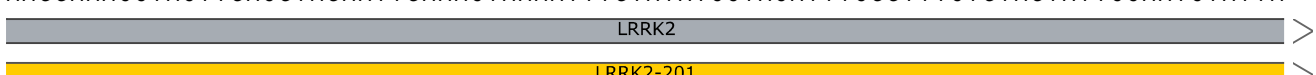
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720

LRRK2

LRRK2-201

LRRK2-201

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800

LRRK2

LRRK2-201

LRRK2-201

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880

LRRK2

LRRK2-201

LRRK2-201

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960

LRRK2

LRRK2-201

LRRK2-201

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1040

LRRK2

LRRK2-201

LRRK2-201

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1120

LRRK2

LRRK2-201

LRRK2-201

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1200

LRRK2

LRRK2-201

LRRK2-201

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1280

LRRK2

LRRK2-201

LRRK2-201

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1360

LRRK2

LRRK2-201

LRRK2-201

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1440

LRRK2

LRRK2-201

LRRK2-201

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1520

LRRK2

LRRK2-201

LRRK2-201

AGCTTGATTTTCATTTTAAAGGAGTTTGTATCTTTTGTGCTAATTGTGGCTACCCCTTCATCCTACCCAATTATTTTCTC
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1600

LRRK2

LRRK2-201

LRRK2-201

TCTTGAAACTGGAAAAGATGGTCATATAAAAATTGGTTTCAGTTCTTACTAAACATTTAGTAGAACTAGCTTTTCAGTGTAT
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1680

LRRK2

LRRK2-201

LRRK2-201

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1760

LRRK2

LRRK2-201

LRRK2-201

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1840

LRRK2

LRRK2-201

LRRK2-201

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1920

LRRK2

LRRK2-201

LRRK2-201

GATTCCTTATTAGTTACAGGAATGAATTGATCACTACTCTGATGTA AAAATTCACCTTATGATTTAGTCTTTTTCTCTAATTT
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2000

LRRK2

LRRK2-201

LRRK2-201

GAAACTGTGGCAACATTTTAAACATATTTCAAAAATATATCTTTCTCTATCCATTATATTTTTGATAACACTTTGACTCTAC
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2080

LRRK2

LRRK2-201

LRRK2-201

TATTAGTTTAAAGGTGGTTTTTTAGCTACCTAAACACTTCTATTTTCATTCAGGTTTTACATTAAGATCATTAGGAATGAA
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2160

LRRK2

LRRK2-201

LRRK2-201

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2240

LRRK2

LRRK2-201

LRRK2-201

TGCATATGTGATATACATGAATATATAGCTATACATCATATATACCATATATGAATATATACACACACATATATAATGTA
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2320

LRRK2

LRRK2-201

LRRK2-201

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2400

LRRK2

LRRK2-201

LRRK2-201

TTTTGAACTTTATAATTTATAGGGTTTTCTTTTCTTTTCTTTTCTTTTTTTTTTTTTTTTTTTTTTTTTTTTGGAGACTGAGTTTCACTCT
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2480

LRRK2

LRRK2-201

LRRK2-201

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2560

LRRK2

LRRK2-201

LRRK2-201

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2640

LRRK2

LRRK2-201

LRRK2-201

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2720

LRRK2

LRRK2-201

LRRK2-201

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2800

LRRK2

LRRK2-201

LRRK2-201

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2880

LRRK2

LRRK2-201

LRRK2-201

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2960

LRRK2

LRRK2-201

LRRK2-201

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3040

LRRK2

LRRK2-201

LRRK2-201

TAGAATAGTGTGACATGTAAAAGAACTCACCTAAATCTCAAGTATACTTTTTAAGCAGTTTATTATTTTATTTTATCTTT
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3120

LRRK2

LRRK2-201

LRRK2-201

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3200

LRRK2

LRRK2-201

F L Q Q R L K K A V P Y N R M K L M I V G N T

ENSE00003496760

LRRK2-201

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3280

LRRK2

LRRK2-201

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

ENSE00003496760

LRRK2-201

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3360

LRRK2

LRRK2-201

I D V 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

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3440

LRRK2

LRRK2-201

LRRK2-201

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3520

LRRK2

LRRK2-201

LRRK2-201

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3600

LRRK2

LRRK2-201

LRRK2-201

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3680

LRRK2

LRRK2-201

LRRK2-201

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3760

LRRK2

LRRK2-201

LRRK2-201

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3840

LRRK2

LRRK2-201

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

ENSE00003509533

LRRK2-201

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3920

LRRK2

LRRK2-201

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

ENSE00003509533

LRRK2-201

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4000

LRRK2

LRRK2-201

LRRK2-201

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4080

LRRK2

LRRK2-201

LRRK2-201

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4160

LRRK2

LRRK2-201

LRRK2-201

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4240

LRRK2

LRRK2-201

LRRK2-201

TCTATATATATATATCTCATCAACTTTGTA

4320

LRRK2

LRRK2-201

LRRK2-201

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4400

LRRK2

LRRK2-201

LRRK2-201

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TAAGGAAGTTTGTGATACCGAAAAATCTTACCTCTGATTTGACGACGAACGTA

4480

LRRK2

LRRK2-201

LRRK2-201

AAAGTCCTTAAAAGCTTGTGTCAGGACATTTAACCATGTAATTGGCTGCATACATGCTTGTGTTTGTAAATTTGGGTATTT
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4560

LRRK2

LRRK2-201

LRRK2-201

PCR Forward

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AAATTACAAAGAAAATAATTGAAAAAATGTCGATCGGTTGCACTCGTTTTATCATGTCACCGTCAGTATAAACGAACTCAC

4640

LRRK2

LRRK2-201

LRRK2-201

GCTTTTATTCTTTTCATTGTAGACTCCAAATTGGTTGACTTTAAAACGAATTTAGAAGATTAATTCACAGATAAGGAAGA
CGAAAATAAGAAAAGTAACATCTGAGGTTTAACCAACTGAAATTTTGCTTAAATCTTCTAATTTAAGTGTCTATTCCTTCT

4720

LRRK2

LRRK2-201

LRRK2-201

GAAAATATAAACTATATGACGTTAATTTGATATAATTTGTGGGTTTATGAAATGCTTATTTTATTTAGGAGTGAATAACT
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4800

LRRK2

LRRK2-201

LRRK2-201

CATCTTAAGGCATGAAGATGGGAAAGGAAAACCTATACCACTACCGTTATATATGCCACCTAAAAGGGTGAAGAATTGGGT
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4880

LRRK2

LRRK2-201

LRRK2-201

TAAGAAAGGCCAAAAATGACTTTTTAAAATGTCGTAAGGTTACATTTTTTCTTAGGTTTAAGGAAAAAAGGACAGTTGT
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4960

LRRK2

LRRK2-201

LRRK2-201

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AGAAAAGAAGAAGACTTCAGACGATCAAAGAGAAAAAGGTAAGTTCACTTACAGTGCCTTTTCGTTTATAGTTGTCTTACA

5040

LRRK2

LRRK2-201

LRRK2-201

Donor Sequence WT -> SNV

CAACAGGAATGT

Donor Sequence WT -> SNV

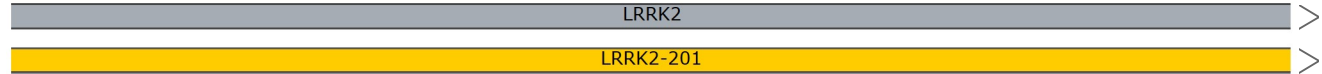
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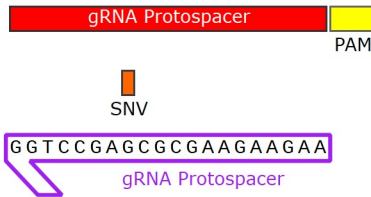
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5120



Donor Sequence WT -> SNV



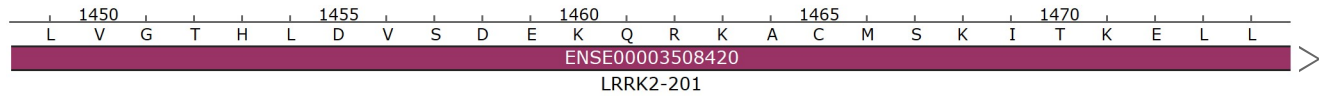
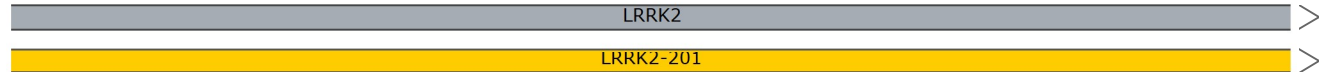
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5200

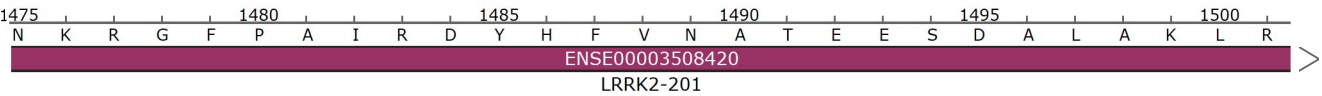


Donor Sequence WT -> SNV

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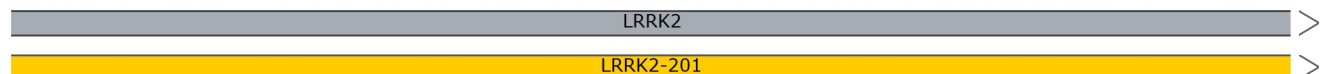
5280



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5360



GCCTAGAAATGTCAGAAATTTTGAGAAAGTGAGCAACTCACTTAAAATTGTGGGTTTTCTTTCCTTGTTGCTGTTAGCATT
CGGATCTTTACAGTCTTTAAAACCTCTTCACTCGTTGAGTGAATTTAACACCCAAAAGAAAGGAACAACGACAATCGTAA

5440

LRRK2

LRRK2-201

LRRK2-201

ATTAAAGTCCTTTCCATTTTAAAATTATTTATGCCAGACTTCATTTCTAATTCATAGAAATGGGAACAAAAATAATTAG
TAATTTACAGGAAAAGGTAAAATTTAATAAATACGGTCTGAAGTAAAGATTAAGTATCTTTACCCTTGTTTTTATTAATC

5520

LRRK2

LRRK2-201

LRRK2-201

AGGAACCTGAGAGAAACTAAGAGACCGTTTCTGGGATACTGAGAAAATGTTTCTGAGAGAGAATCTGAGAAAATGTTTTT
TCCTTGGACTCTCTTTGATTCTCTGGCAAAGACCCATGACTCTTTTACAAAGACTCTCTCTTAGACTCTTTTACAAAA

5600

LRRK2

LRRK2-201

LRRK2-201

GATGCCTTTTCTGATTCAACTTCTTATAGTGGTGATTCAATCACAAAGGGTAAAGGTGAATACTGAGGTCTTGGGATCATC
CTACGGAAAAGACTAAGTTGAAGAATATCACCACTAAGTTAGTGTTCCCATTTCCACTTATGACTCCAGAACCCCTAGTAG

5680

LRRK2

LRRK2-201

LRRK2-201

CTCCAGAACCCCTAGTAG
PCR Reverse

TTTCTTCTATTATTCTTTAACTGTTATTTTCCATTTCTTCTTTTCTTTTGGAAATTCCTGTTTTATGGACATCTTGATCT
AAAGAAGATAATAAGAAATTGACAATAAAAAGGTAAAGGAGAAAAGAAAACCTTAAGGACAAAATACCTGTAGAACTAGA

5760

LRRK2

LRRK2-201

LRRK2-201

AAAGAAGA

PCR Reverse

TTTGTGCCACTCATTGATGAATTTTGTCACTGTGATTCCCATTTCCAATTTTTTCCCTCCGTATTGTGAGGCAGCTGTTT
AAACACGGTGAGTAAGTACTTAAAACAGTGACACTAAGGGTAAAGGTTAAAAAAGGGAGGCATAAACACTCCGTCGACAAA

5840

LRRK2

LRRK2-201

LRRK2-201

TATTTAGTCATGAAGACCACTAACTTGGTTTTTCAGCAGTGTCTCACTAATTAAGTTTATACAAAATGGGCTTTTTAT
ATAAATCAGTACTTCTGGTGATTGAACCAAAAGTCGTACACAGAGTGATTAATGAATCAAGTATGTTTTACCCGAAAAATA

5920

LRRK2

LRRK2-201

LRRK2-201

TTTAGGAATTATGTTTTAAATGTTTAAAGTTATCTTCTCGTAAGCCAAATTTTTATAAAATGTAAATAAATCAGTTATCA
AAATCCTTAATACAAAATTTACAAAATTTCAATAGAAGAGCATTTCGGTTTTAAAAATATTTTACATTTATTTAGTCAATAGT

6000

LRRK2

LRRK2-201

LRRK2-201

GAGAGAACACTTTTTTTTTTAAATACTTGGCAGAAAAAAGAAATCTTCACTGGGTACTACAGGGAGTGTGGTGTAAACTG
CTCTCTTGTGAAAAAAAAAATTTATGAACCGTCTTTTTTCTTTAGAAGTGACCCATGATGTCCCTCACACCACATTTGAC

6080

LRRK2

LRRK2-201

LRRK2-201

TACTGAAAAATACCCTTGATAGTTCCATATGACAAACATAATGATGAATTTCACTTAGTCTGTCTTGGCTTAGCTCAATA
ATGACTTTTTATGGGAACATCAAGGTATACTGTTTGTATTACTACTTAAAGTGAATCAGACAGAACCGAATCGAGTTAT

6160

LRRK2

LRRK2-201

LRRK2-201

GCACTAATGATCAAGATACTGGCTGATAAATAGAGTCCTATTTGGCCTGGGCAGTCCCAGCATAATTATGTAATAGTGTC
CGTGATTACTAGTTCTATGACCGACTATTTATCTCAGGATAAACCGGACCCGTCAGGGTCGTATTAATACATTATCACAG

6240

LRRK2

LRRK2-201

LRRK2-201

CCACTATATTCTCAAAAAGCATTCCAATTTGGATGATAAATTATATAGTCACCTTGGTTATAACTCCATGCTGGCCAGTTA
GGTGATATAAGAGTTTTTCGTAAGGTTAAACCTACTATTTAATATATCAGTGGAACCAATATTGAGGTACGACCGGTCAAT

6320

LRRK2

LRRK2-201

LRRK2-201

GCTTAGTTCTGTTCCATTTATATAGATTATGTGTGCTTCACTCCAAAACCTAATGAGCCATTTGTAAAAGTGATGGCTTT
CGAATCAAGACAAGGTAAATATATCTAATACACACGAAGTGAGGTTTTGGATTACTCGGTAAACATTTTCACTACCGAAA

6400

LRRK2

LRRK2-201

LRRK2-201

TGCGGTGCCAGGGAGAGAATTTGTATGTTTGTATCCTTCAACACACATTTATTACAGTTATTAAAAGGTTTTATTGATG
ACGCCACGGGTCCCTCTCTTAAACATACAAACATAGGAAGTTGTGTGTAATAATGTCAATAATTTTCCAAAATAACTAC

6480

LRRK2

LRRK2-201

LRRK2-201

ATAGATGGTAATGTCATGTAAAAATGACATATTATTTATTTGTAGACTTTCCTATTCTCTTGGTGGACATGTAATTAGAA
TATCTACCATTACAGTACATTTTTACTGTATAATAAATAAACATCTGAAAGGATAAGAGAACAACCTGTACATTAATCTT

6560

LRRK2

LRRK2-201

LRRK2-201

ACTAATATGACTTAAAGAAAAACAAATACACAAAATTTATTCATCCAATTAATCTCTTAATCCAGGTGTTTTTTTTTCT
TGATTATACTGAATTTCTTTTTGTTTATGTGTTTTAAATAAGTAGGTTAATTAGAGAATTAGGTCCACAAAAAAAAAAGA

6640

LRRK2

LRRK2-201

LRRK2-201

GAGACTATACCCATACTTCAATAACTTTGTTGTTACTGAGAATATTTTGGAGTTTCCCTTTTTGTCATTGTTGTCAGAGAA
CTCTGATATGGGTATGAAGTTATTGAAACAACAATGACTCTTATAAAACTCAAAGGGAAAAACAGTAACAACAGTCTCTT

6720

LRRK2

LRRK2-201

LRRK2-201

TGTATCATATCTTTAAAAAGACTTGTTGGAGGATGAGTTTGTGTTTAAAAAGGCCTGAATTTAGTTGATGCAAAGTCACAG
ACATAGTATAGAAATTTTTCTGAACAACCTCCTACTCAAACAAAACTTTTCCGGACTTAAATCAACTACGTTTTCAGTGTC

6800

LRRK2

LRRK2-201

LRRK2-201

ATAAGATGGTTCATTAAGCTGTATTAATACTGCTTTTTGTCTAATAGATATCATTACCAATAAGTCAGACTAGTTTTTCTT
TATTCTACCAAGTAATTCGACATAATTATGACGAAAACAGATTATCTATAGTAATGGTTATTCAGTCTGATCAAAAAGAA

6880

LRRK2

LRRK2-201

LRRK2-201

TTGGCACTTATAAATCACCTTTGAAGACAACTTTTTACAAGGAAATAAAACAAATGCTTTGAGAAATACCAGTATTATTG
AACCGTGAATATTTAGTGGAACCTTCTGTTGAAAAATGTTCCCTTTATTTGTTTACGAAACTCTTTATGGTCATAATAAC

6960

LRRK2

LRRK2-201

LRRK2-201

AAAGAAAAGTATATATTGCTAATGGATGCAGCATTCTGGCATAATGGTTTAAAAACTCATTTGATTGCTTTGTAGAAGAA
TTTCTTTTCATATATAACGATTACCTACGTCGTAAGACCGTATTACCAAACCTTTTGGAGTAAACTAACGAAACATCTTCTT

7040

LRRK2

LRRK2-201

LRRK2-201

TGACTCTTTTCAGATGACCCAGGGCCTGTGAGCCTGCCAGAACTTGAAAAATCTTTCTTCCCTGAGGTGCTTCAACCTGAA
ACTGAGAAAAGTCTACTGGGTCCC GGACACTCGGACGGTCTTGAACTTTTAAGAAAAGAAGGGACTCCACGAAGTTGGACTT

7120

LRRK2

LRRK2-201

LRRK2-201

TTCAAAGAGCAGCTTTTAATCTATTAGAGATCATTTTTTGTCTCTCATTTATTTTTTCATATTTGCCTTTGATCTTAGCT
AAGTTTCTCGTCGAAAATTAGATAATCTCTAGTAAAAAACAGGAGAGTAAATAAAAAAGTATAAACGGAACTAGAATCGA

7200

LRRK2

LRRK2-201

LRRK2-201

CTTCTCTAATCTTTTTCTGTCTCAACCTTATTAACAGGTGTCTGTGCAGACACTTTTAAGTTTTGTTTTTGGCTCAGCC
GAAGAGATTAGAAAAGACAGAGTTGGAATAATTGTCCACAGACACGCTCTGTGAAAATTCAAAAACAAAAACCGAGTCGG

7280

LRRK2

LRRK2-201

LRRK2-201

TGTCAGTTAACTGATAATCATGCTGAAAGGAGAAGCAGGACAAAACAGAGTTCAATGCTGACAATACTCCTTTTAATCTT
ACAGTCAATTGACTATTAGTACGACTTTCTCTTCGTCTGTTTTGTCTCAAGTTACGACTGTTATGAGGAAAATTAGAA

7360

LRRK2

LRRK2-201

LRRK2-201

GTCCAGCCCATTAGCAGAGCAGGCATCTCTGTGGGCCTTGAGACGTAGTCCCGTAAAACTCATCCCGTTTCTACTTGATT
CAGGTCGGGTAAATCGTCTCGTCCGTAGAGACACCCGGAACCTCTGCATCAGGGCATTGAGTAGGGCAAAGATGAACTAA

7440

LRRK2

LRRK2-201

LRRK2-201

TGCTTTCTTTGAGAACTCTTGTTTTATTTTTATATGGAGGTTTCTGCCTTGGATTAAAACATAAACCTCAATCTGAAGTT
ACGAAAAGAACTCTTGAGAACAATAAAAAATATACCTCCAAAGGACGGAACCTAATTTTGTATTTGGAGTTAGACTTCAA

7520

LRRK2

LRRK2-201

LRRK2-201

CAATTTTCATCTTAATTTATGAACGACTAAGAGAGGGAAACATGAAAAGTGGAGGTTAGTGAAATTATCTCTAATTCTCTGG
GTTAAAGTAGAATTAATACTTGCTGATTCTCTCCCTTGTACTTTTACCTCCAATCACTTTAATAGAGATTAAGAGACC

7600

LRRK2

LRRK2-201

LRRK2-201

GTTAAGAGATACATGAAAAACAGTCTCTTGAGTAACCATTTGCAGGTAAATATGGAAGTAATGGTTATGGTTGTCTCTTTA
CAATTCTCTATGTACTTTTTGTCAGAGAACTCATTGGTAAACGTCCATTTATACCTTCATTACCAATACCAACAGAGAAAT

7680

LRRK2

LRRK2-201

LRRK2-201

AGTTTTTAGTCACAAGTAGAAAAAGACCAAGTTAATTTTTTCTGTGTGTGCTGAATTTCTATTTGTAGTAAGTGTAAGA
TCAAAAATCAGTGTTTCATCTTTTTCTGGTTCAATTAAAAAAAGACACACACGACTTAAAGATAAACATCATTACATTCT

7760

LRRK2

LRRK2-201

LRRK2-201

ATTTAAGCAGAAATTCTGATTCGTATTTTCAGATAAAAAGAATATGTAATTTCCATAGGTCAGAAATAGGGAGAGTTTTG
TAAATTCGTCTTTAAGACTAAGCATAAAAAGTCTATTTTTCTTATACATTAAAGGTATCCAGGTCTTTATCCCTCTCAAAC

7840

LRRK2

LRRK2-201

LRRK2-201

CCATCTGGTGGTTCTTAACGGCACTCTGGATATTATTAAGAGTTGCATTTCTATTTAAAATTATATTTTAAAAACGTTT
GGTAGACCACCAAGAATTGCCGTGAGACCTATAATAATTCTCAACGTAAAGATAAATTTTAAATATAAAATTTTTTGCAA

7920

LRRK2

LRRK2-201

LRRK2-201

GGAAGATACTTTTATTGTAGAAACTATCCTCTTAGGGCCATTCTTTAAAAAAATCTTATTTTATATATTTCTCATTTTGT
CCTTCTATGAAAAAATCAATCTTTGATAGGAGAATCCCGGTAAGAAATTTTTTTAGAAATAAAATATATAAAGAGTAAAAACA

8000

LRRK2

LRRK2-201

LRRK2-201

TGATAGTGATTAGATTCTAAGAGCAACAGAACAATGATCATCCTCTCCTATCAGAATCACTGATGTTTAGATGATTTCTC
ACTATCACTAATCTAAGATTCTCGTTGTCTTGTACTAGTAGGAGAGGATAGTCTTAGTGACTACAAATCTACTAAAGAG

8080

LRRK2

LRRK2-201

LRRK2-201

ATTTTCCCAAGTTCAAGGTTCCATGAAAAACATAGCTTGAGTGGGATTTTATGTCTCTGCGTTTCACTGTTGATATATAT
TAAAAGGGTTCAAGTTCCAAGGTACTTTTTGTATCGAACTCACCTAAAATACAGAGACGCAAAGTGACAACCTATATATA

8160

LRRK2

LRRK2-201

LRRK2-201

GTCCTCCCAATATAACATTTTACAAATAACCAAGCACAAAATTTAATATTTTACCTTGAATATTTAAAAATATAATAATAT
CAGGAGGGTTATATTGTAAATGTTTATTGGTTCGTGTTTTAAATTATAAAATGGAACCTTATAAAATTTTATATTATTATA

8240

LRRK2

LRRK2-201

LRRK2-201

CCAAAAGCTCTTGTAAATTTGTAAGTACTGATATCTTATACTAGCGTGTCTGTTTCACATTAAGTTTAAATGTCTTAGGATATAAA
GGTTTTTCGAGAACATTAACATGACTATAGAATATGATCGCACAGACAAAAGTGAATTCAAATTACAGAATCCTATATTT

8320

LRRK2

LRRK2-201

LRRK2-201

AAATCTTTTTTATGGTTAGTGATTTATCTTGTTTTTTTTTTCCATGGAATTTCTGGATAGCGAGATAAATATTTCCATACT
TTTAGAAAAAATACCAATCACTAAATAGAACAAAAAAGGTACCTTAAAGACCTATCGCTCTATTTATAAAGGTATGA

8400

LRRK2

LRRK2-201

LRRK2-201

ATTTTATTTGATATTTCCAAATTTGCCTCTGAATCAACAATTTTCTATTTTAAATTTTATTGTAAGTACTTGTTCCTTACAACC
TAAAAATAACTATAAAGGTTTAAACGGAGACTTAGTTGTTAAAAGGATAAAATTAAGTAACATGAACAAGGAATGTTGG

8480

LRRK2

LRRK2-201

LRRK2-201

TAAATAGCTTTTTATTATATTTTGAATTTTAAAAATGTAAGTACTTCTGAATAATATATCTGTTTCTGTAAAAACTGTTAG
ATTTATCGAAAAATAATATAAAACTAAAAATAATTTTTACATGAAGACTTATTATATAGACAAAAGACATTTTTTGACAATC

8560

LRRK2

LRRK2-201

LRRK2-201

CACTGAATTTGCCAACCATTTGACAAATACACAAATAAAATAGATTTTTACGGCTTGTCAATTTGTAATTTATAGATCCG
GTGACTTAAACGGTTGGTAAACTGTTTATGTGTTTATTTTATCTAAAAATGCCGAACAGTAAACATTAAAGTATCTAGGC

8640

LRRK2

LRRK2-201

LRRK2-201

I R
ENSE...

AGATCAGCTTGTGTTGGACAGCTGATTCAGACTGCTATGTAGAAGTGAATAATCATTATTCGGAGCGTAAAAATG
TCTAGTCGAACAACAACCTGTGACTAAGGTCTGACGATACATCTTGAACCTTTTTTAGTAAAAATAGCCTCGCATTTTTAC

8720

LRRK2

LRRK2-201

1515 D Q L V V 1520 G Q L I P 1525 C Y V E 1530 L E K I I 1535 S E R K 1540 N

ENSE00003622781

LRRK2-201

TGCCAATTGAATTTCCCGTAATTGACCGGAAACGATTATTACAAC TAGTGAGAGAAAATCAGCTGCAGTTAGATGAAAAT
ACGGTTAACTTAAAGGGCATTAACTGGCCTTTGCTAATAATGTTGATCACTCTCTTTTAGTCGACGTCAATCTACTTTTA

8800

LRRK2

LRRK2-201

1545 1550 1555 1560 1565
V P I E F P V I D R K R L L Q L V R E N Q L Q L D E N

ENSE00003622781

LRRK2-201

GAGCTTCCTCACGCAGTTCAC TTTCTAAATGAATCAGGTTTGTGTTTTTCGTTCTTATTTTCAAAGCTCAGCTGTAGTA
CTCGAAGGAGTGCCTCAAGTGAAAGATTTACTTAGTCCAAACACAAAAAGCAAGGAATAAAAGTTTCGAGTCGACATCAT

8880

LRRK2

LRRK2-201

1570 1575
E L P H A V H F L N E S

ENSE00003622781

LRRK2-201

ACTTATAAAAGTGTCTGAACTTTTATAGAATTTACATTCAAAGTTGAGAGAATATCCATACGGTTCTTTAATAGGCC
TGAATATTTTACAAAAGACTTAGAAAATATCTTAAATGTAAGTTTCAACTCTCTTATAGGTATGCCAAGAAATTATCCGG

8960

LRRK2

LRRK2-201

LRRK2-201

ACTGATTTTTTTCTTTTTGGAAGATCATCATGTGTGTTTCATGACAAATCATGTATCATGTCATAAGAAAAACAAATTTAGA
TGACTAAAAAAGAAAAACCTTCTAGTAGTACACACAAGTACTGTTTAGTACATAGTACAGTATTCTTTTGTTTAAATCT

9040

LRRK2

LRRK2-201

LRRK2-201

AATCACCTAGGAGTAAAGCAGTGGAAAGAGTCCCTGAGTGGGAGTTAAAAATATTTGGGTTCTAGAACTTGTCTTTACTAT
TTAGTGGATCCTCATTTTCGTACCTTTCTCAGGGACTCACCTCAATTTTATAAACCCAAGATCTTGAACAGAAATGATA

9120

LRRK2

LRRK2-201

LRRK2-201

TCAGGAGCTGTGGAACCCTGAATAGTCAAATGACATTCATAATGTCAAATGAGTTTAGTGCATGTGAAAAGTTATTTTTAT
AGTCCTCGACACCTTGGGACTTATCAGTTTACTGTAAGTATTACAGTTTACTCAAATCACGTACACTTTCAATAAAAAATA

9200

LRRK2

LRRK2-201

LRRK2-201

ATTGCAAAGGGGAATTATTGTTGGCATGGTCTAACTGGGACGCTTGGAGAGTCAATGGCTCCCTGAGATGATGCAGCTTC
TAACGTTTCCCCTTAATAACAACCGTACCAGATTGACCCTGCGAACCTCTCAGTTACCGAGGGACTCTACTACGTCGAAG

9280

LRRK2

LRRK2-201

LRRK2-201

TGAGTGGAAGATCTAGCTCTCTTGCATCAAATATTGATCTCAAAGATGAAAATTCTCAAAGCAACTTCAGTGCTAATTGT
ACTCACCTTCTAGATCGAGAGAACGTAGTTTTATAACTAGAGTTTCTACTTTTTAAGAGTTTCGTTGAAGTCACGATTAACA

9360

LRRK2

LRRK2-201

LRRK2-201

GTACTTGATCATATTACCTTGCTAGAAATGTGTGAGTTGTTTGATAGTACTAGAGTAAGTGACTGGGAAGCTGCTTTTTGA
CATGAACTAGTATAATGGAACGATCTTTACACACTCAACAACTATCATGATCTCATTCACTGACCCTTCGACGAAAACT

9440

LRRK2

LRRK2-201

LRRK2-201

TCCCTAGATTCTGTTGTATAAAAAATAGCTTCCCGTGGTTTTATGATCTGTTCCTTTTCCCATCGTTCCTTAAGGTATGCT
AGGGATCTAAGACAACATATTTTTTATCGAAGGGCACCAAATACTAGACAAGGAAAAGGGGTAGCAAGAATTCCATACGA

9520

LRRK2

LRRK2-201

LRRK2-201

GAGATATGCTGTGTTTCTTATCTGTATTTGAAAATAAAACATGTCTTTGTAGTGTGTATTTCAGCAAGCGAAACAGAAAAAT
CTCTATACGACACAAAGAATAGACATAAACTTTTTATTTTGTACAGAAACATCACACATAAGTCGTTTCGCTTTGTCTTTTA

9600

LRRK2

LRRK2-201

LRRK2-201

TATGAATTTCTACTTATGTGTGAAATATGCTCTGTAATGCATGTCAGTGTCTCAAATATGCTTAAATATGATCATTTTAT
ATACTTAAAGATGAATACACACTTTTATACGAGACATTACGTACAGTCACAGAGTTTATACGAATTTATACTAGTAAAATA

9680

LRRK2

LRRK2-201

LRRK2-201

GTAGTTTTAAAAATACTCCATTATAATATTGGAACCTTAGACCATAGGATGCACAGCTTCTAGTCCCAGCTCTGTCACTAG
CATCAAATTTTTATGAGGTAATATTATAACCTTGAAATCTGGTATCCTACGTGTCGAAGATCAGGGTCGAGACAGTGATC

9760

LRRK2

LRRK2-201

LRRK2-201

CTATGCTGAAATTTCTTACCTGCAAAATGAGGAAGTTGGACTAGATTTTTTCTAAAGCCCTTGATATTTGTTCTAGAT
GATACGACTTTAAAGAAGTGGACGTTTTACTCCTTCAACCTGATCTAAAAAAGATTTTCGGGGAACATAAAACAAGATCTA

9840

LRRK2

LRRK2-201

LRRK2-201

TCCATGTTTCACTGTTTGATGACTTTTTACTACAGGAGTCCTTCTTCATTTTCAAGACCCAGCACTGCAGTTAAGTGACT
AGGTACAAAAGTGACAAACTACTGAAAAATGATGTCCTCAGGAAGAAGTAAAAGTTCTGGGTCGTGACGTCAATTCAGTGA

9920

LRRK2

LRRK2-201

1580 1585 1590

G V L L H F Q D P A L Q L S D

ENSE00003581684

LRRK2-201

TGTACTTTGTGGAACCCAAGTGGCTTTGTAAAATCATGGCACAGGTTGGTGTCTTTTTATTTTTGTGGCACGGGGGTTATG
ACATGAAACACCTTGGGTTACCCGAAACATTTTAGTACCGTGTCCAACCACAGAAAATAAAAACACCGTGCCCCCAATAC

10,000

LRRK2

LRRK2-201

1595 1600 1605
L Y F V E P K W L C K I M A Q V G V F Y F C G T G V M

ENSE00003581684

LRRK2-201

(in frame with LRRK2-201)

GTCAAAGCATAGAACAGATGGCGCCAGAGCATTGAGCATTTTAGAATTTGGGTTTAGTTAAGGCAGAACTTTTTGTGAA
CAGTTTCGTATCTTGTCTACCGCGGGTCTCGTAACTCGTAAAATCTTAAACCCAAATCAATTCCGTCTTTGAAAACACTT

10,080

LRRK2

LRRK2-201

V K A

TTTGGAAAACCTGTGGAACATTTACATAGAAAGACTACTTGAAGAGCTTCATGGAAGAAGGAAAAGATGTCTTGAGTTCACT
AAACCTTTTGACACCTTGTAAAGTGTATCTTCTGATGAACTTCTCGAAGTACCTTCTTCTTTCTACAGAACTCAAGTGA

10,160

LRRK2

LRRK2-201

TCCATGACTTGGTTTTCAAGCCACATACAGATGTTTGTATCACTCTGCCCATGCTGCTTTACTAGATCCTGATGATGTC
AGGTACTGAACCAAAAGTTCGGTGTATGTCTACAAACATAGTGAGACGGGGTACGACGAAATGATCTAGGACTACTACAG

10,240

LRRK2

LRRK2-201

ATTGGTTTGGTTACTGAATTAGTCAATTGAATGATGGCTTTGTGGAAATCCTTGGGGTAAACACATATAAGAAAATTAGG
TAACCAAACCAATGACTTAATCAGTTAACTTACTACCGAAACACCTTTAGGAACCCCATTTGTGTATATTCTTTTAATCC

10,320

LRRK2

LRRK2-201

TTGCTGAGCCTGTGAAACCTCTATCTAGATAACATGGAGGTGAGTTTTGACTTAAGTGAATGATCTGAGCTTTAAATGC
AACGACTCGGACACTTTGGAGATAGATCTATTGTACCTCCACTCAAACTGAATTCACCTTACTAGACTCGAAATTTACG

10,400

LRRK2

LRRK2-201

TTACGATTTTGAAAACCTTTGGATGGCCTTGGTTATAGCTATTTTTTCTTATATTTTACATGGAAAATGATTTTTTCTC
AATGCTAAAACCTTTGAAAACCTACCGGAACCAATATCGATAAAAAAAGAATATAAAGTGTACCTTTTACTAAAAAAGAG

10,480

LRRK2

LRRK2-201

CAAATGATAATCCATTACCAATGAGTTTAATTAGTTATAATAATCCATCTCTGTAGCTTTGACATAAAAAGACCATTTGAG
GTTTACTATTAGGTAATGGTACTCAAATTAATCAATATTATTAGGTAGAGACATCGAAACTGTATTTTTCTGGTAAACTC

10,560

LRRK2

LRRK2-201

CAAAACATACTACCTCAGGGCTTTTTCAACCCAGCATGATGACATTTTGGGCCAGATAATTCTTTGTTGCACATTGTAGG
GTTTTGTATGATGGAGTCCCGAAAAGTTGGGGTCGTAATAAACCCTGCTACTACTGTAAAACCCGGTCTATTAAGAAACAACGTGTAACATCC

10,640

LRRK2

LRRK2-201

ATGTTAGCAGCATTTTTGGCCTTTATATTCGAGACGTAAGTAGTATCCTCTAGCTGTGACAAGCAAAAATGTATCCAGAC
TACAATCGTCGTAAAAACCGGAAATATAAGCTCTGCATTTCATCATAGGAGATCGACACTGTTTCGTTTTTACATAGGTCTG

10,720

LRRK2

LRRK2-201

ATTGCTAAATATTGCTTGGAGAATGTGAAAAATTACCCTAGTTGAGAAACATTAAGCTACTGATTTGTTGATGAGTAAAA
TAACGATTTATAACGAACCTCTTACACTTTTTAATGGGATCAACTCTTTGTAATTCGATGACTAAACAACACTACTCATTTT

10,800

LRRK2

LRRK2-201

TTTATAGTTTTGCATGTGGCTGCCGAGTTCCTAAAATTATTATATATTTTTATGTTAGAAATATCTCTTCCAATTAAC
AAATATCAAAACGTACACCGACGGGCTCAAGGATTTTAATAATATATAAAAATACAATCTTTATAGAGAAGGTTAATTTG

10,880

LRRK2

LRRK2-201

CATAAAGGTAATTAATTCCTCAGGCAGCCTTGAATAATTGTTTCTAAATTCATCTAAGGAAAAAAGGAAGCTATTG
GTATTTCCATTAATTTAAGTGAGTCCGTCGGAACCTTATTAACAAGGATTTAAGGTAGATTCTTTTTTTCTTCGATAAC

10,960

LRRK2

LRRK2-201

TGAAGAGAGAACTCAGTTGAGGCTAAATCCTGTACCATGGAACCTCAAGAGCATATTGAAACATTGCAATCAGCAATTATT
ACTTCTCTCTTGAGTCAACTCCGATTTAGGACATGGTACCTTGAGTTCTCGTATAACTTTGTAACGTTAGTCGTTAATAA

11,040

LRRK2

LRRK2-201

TGCAGTGTGTCAGTTACTATTGTTGGTAGGTATTTTTAAATTAGATTTTTAGCCTTCTGCACATATGTCATGGATAAT
ACGTCACACAGTCAATAATGATAAAACCATCCATAAAAATTTAATCTAAAAGTCGGAAGACGTGTATACAGTACCTATTA

11,120

LRRK2

LRRK2-201

GTGATTTACTCAATTATTAATGATAATGGAGACAGTAGTGTGACCCAGAGCACTTACTTGAGCATCAGCTTGACCTAC
CACTAAAATGAGTTAATAATTTACTATTACCTCTGTTCATCACACTGGGTCTCGTGAATGAACCTCGTAGTCGAACTGGATG

11,200

LRRK2

LRRK2-201

GTTTCAGTCTCTTTAATTACTTATTAGCTCTGTGAAATTTCTTAATGCATTAAGCCTTTGTTTACTTACTTTTTAAATAA
CAAAGTCAGAGAAATTAATGAATAATCGAGACACTTTAAAGAATTACGTAATTCGGAACAATGAATGAAAAATTTATT

11,280

LRRK2

LRRK2-201

GGAAAATAACAATTATCTTCTATATTGCCTCCCTGGTTTCAGTGTAAGTGAGGGGTAAATGTTAGCTAATTTTATATTGGA
CCTTTTATTGTTAATAGAAAGATATAACGGAGGGACCAAGTCACATTCACCTCCCCATTTACAATCGATTAAAAATATAACCT

11,360

LRRK2

LRRK2-201

TCTATTTGGCAATTTAAAGAATGTTAATCAGGAAATTTTAAAAAATTCAGAACTATAAAGAGGTAAGTACTTACGTAGTTTTGG
AGATAAACCGTTAAATTTCTTACAATTAGTCCTTTAAAATTTTTTAAGTCTTGATATTTCTCCATGAATGCATCAAAACC

11,440

LRRK2

LRRK2-201

AAAGTGTGTCATGTATGGGGACAAATAAAAAAGATGTGTAGGTAGCTGCATCCTGTACAGCAAAGGAAGTTTTAAATATA
TTTCACACAGTACATACCCCTGTTTATTTTTTCTACACATCCATCGACGTAGGACATGTCGTTTCCTTCAAAATTTATAT

11,520

LRRK2

LRRK2-201

TCCAGCAATTTTGTTCCTAGCTGGCGCACAAATAGTTATCAGGAGGTAAGTCAACTCCACATAGTCAAGGAAAAGCTAA
AGGTCGTTAAAACAACAGGATCGACCGCGTGTATCAATAGTCCTCCATTGAGTTGAGGTGTATCAGTTCTTTTCGATT

11,600

LRRK2













LRRK2-201

AGTTGC 3'
+-----+ 11,606
TCAACG 5'

LRRK2

LRRK2-201

Feature	Location	Size			Type
LINC02471	1 .. 11,606	11,606 bp		→	gene
/note	= gene ENSG00000223914 lncRNA				
✓ LRRK2	1 .. 11,606	11,606 bp		→	gene
/note	= gene ENSG00000188906 Protein coding				
LINC02471-202	1 .. 11,606	11,606 bp		→	prim_transcript
/note	= primary transcript ENST00000641941 lncRNA				
✓ LRRK2-201	1 .. 11,606	11,606 bp		→	prim_transcript
/note	= primary transcript ENST00000298910				
LRRK2-204	1 .. 11,606	11,606 bp		→	prim_transcript
/note	= primary transcript ENST00000430804 Nonsense mediated decay				
LRRK2-206	1 .. 11,606	11,606 bp		→	prim_transcript
/note	= primary transcript ENST00000479187 Retained intron				
LRRK2-210	1 .. 11,606	11,606 bp		→	prim_transcript
/note	= primary transcript ENST00000679360 Nonsense mediated decay				
LRRK2-218	1 .. 11,606	11,606 bp		→	prim_transcript
/note	= primary transcript ENST00000680790				
✓ LRRK2-201	449 .. 9964	9516 bp		→	CDS
▶ 6 segments = 1050 bp					
/note	= coding sequence ENSP00000298910				
/translation	= IPPEIGCLENLTSLDVSYNLELRSFPNEMGKLSKIWDLPLDELHLNFDKFKHIGCKAKDIIR,,FLQQLKKA V PYNRMKLMIVGNTGSGKT TLLQQLMKT K KSDLGMQ SATV GIDV KDWPIQ IRDKRKRDLV LNV W DFA,,GREEFYSTHP HFMTQ RALY LAVYDLSKGQA EVDAMKP WLFNIK,,ARASSSPVILV GTHLDV SDEKQ RKACMSKITKELLNKRGFPA IRDYHFVNATEESDALA KLRKTIINESLNFK,,IRDQLVVGG LIPDCYVELEKIILSERKNVPIEFPVIDRKRLQLVRENQLQLDENELPHAVHFLNES,,GVLLHFQDPALQLSDLYFV EPKWLC KIMAQ 350 amino acids = 40.4 kDa				
LRRK2-218	449 .. 9964	9516 bp		→	CDS
▶ 6 segments = 1050 bp					
/note	= coding sequence ENSP00000505335				
/translation	= IPPEIGCLENLTSLDVSYNLELRSFPNEMGKLSKIWDLPLDELHLNFDKFKHIGCKAKDIIR,,FLQQLKKA V PYNRMKLMIVGNTGSGKT TLLQQLMKT K KSDLGMQ SATV GIDV KDWPIQ IRDKRKRDLV LNV W DFA,,GREEFYSTHP HFMTQ RALY LAVYDLSKGQA EVDAMKP WLFNIK,,ARASSSPVILV GTHLDV SDEKQ RKACMSKITKELLNKRGFPA IRDYHFVNATEESDALA KLRKTIINESLNFK,,IRDQLVVGG LIPDCYVELEKIILSERKNVPIEFPVIDRKRLQLVRENQLQLDENELPHAVHFLNES,,GVLLHFQDPALQLSDLYFV EPKWLC KIMAQ 350 amino acids = 40.4 kDa				
✓ Donor Sequence WT -> SNV	5029 .. 5128	100 bp		⇌	misc_feature
✓ gRNA Protospacer	5091 .. 5110	20 bp		⇌	misc_feature
LRRK2-220	5095 .. 11,606	6512 bp		→	prim_transcript
/note	= primary transcript ENST00000681696				
LRRK2-220	5095 .. 9964	4870 bp		→	CDS
▶ 3 segments = 510 bp					
/note	= coding sequence ENSP00000505871				
/translation	= ARASSSPVILV GTHLDV SDEKQ RKACMSKITKELLNKRGFPA IRDYHFVNATEESDALA KLRKTIINESLNFK,,IRDQLVVGG LIPDCY VELEKIILSERKNVPIEFPVIDRKRLQLVRENQLQLDENELPHAVHFLNES,,GVLLHFQDPALQLSDLYFV EPKWLC KIMAQ 170 amino acids = 19.6 kDa				
✓ SNV	5098 .. 5098	1 bp		⇌	misc_feature
/note	= WT = C SNV = T				
✓ PAM	5111 .. 5113	3 bp		⇌	misc_feature
LRRK2-211	5130 .. 11,606	6477 bp		→	prim_transcript
/note	= primary transcript ENST00000679532 Nonsense mediated decay				
LRRK2-213	5131 .. 11,606	6476 bp		→	prim_transcript
/note	= primary transcript ENST00000680018 Nonsense mediated decay				

Feature		Location	Size			Type
LRRK2-215		5133 .. 11,606	6474 bp			prim_transcript
/note	=	primary transcript ENST00000680422 Nonsense mediated decay				
LRRK2-217		5133 .. 11,606	6474 bp			prim_transcript
/note	=	primary transcript ENST00000680453 Nonsense mediated decay				
LRRK2-216		5221 .. 11,606	6386 bp			prim_transcript
/note	=	primary transcript ENST00000680425 Nonsense mediated decay				
LRRK2-219		7053 .. 11,606	4554 bp			prim_transcript
/note	=	primary transcript ENST00000681136 protein_coding_CDS_not_defined				
LRRK2-207		7378 .. 11,606	4229 bp			prim_transcript
/note	=	primary transcript ENST00000481256 protein_coding_CDS_not_defined				

Primer	Length	Binding Sites	Tm	Date Added
✓ PCR Forward	25-mer	4609 .. 4633	57°C	May 4, 2023
/sequence	= ATAGTACAGTGGCAGTCATATTTGC 40% GC / 7696.1 Da			
✓ Donor Sequence WT -> SNV	100-mer	5029 .. 5128	77°C	May 4, 2023
/sequence	= CAACAGGAATGTGAGCAGGCCAGTTTGAAAGCAAACACAAGAGGGTTTTGTGTCTTTCCCTCCAGGCTTGCGCTTCTTCTT 60% GC / 7696.1 Da			
✓ gRNA Protospacer	20-mer	5091 .. 5110	62°C	May 4, 2023
/sequence	= AAGAAGAAGCGCGAGCCTGG 60% GC / 6225.1 Da			
✓ Sanger Sequencing Primer	20-mer	5241 .. 5260	58°C	May 4, 2023
/sequence	= CAGATTCCTCGGTGGCATTG 55% GC / 6084.0 Da			
✓ PCR Reverse	25-mer	5664 .. 5688	58°C	May 4, 2023
/sequence	= AGAAGAAAGATGATCCCAAGACCTC 44% GC / 7677.1 Da			