

**ASK2J00175\_PRKN\_P437L\_C04\_AB**  
9001 bp

5'  
3'

CCACTGACATTGCAACCACACAGTCCCCTCCTCTCCCCAGGACGCTTCTGTGTGTCGTCACCTGCCCATGGCTGGCTCCTTCTCTGTC  
GGTACTGTAACGTTGGTGTGTGTCAGGGCGAGGAGAGGGGTCTCTGCGAAGACACAGCAGTACGCGGTACCGACCGAGGAAGGACAG

85

PRKN

PRKN-206

CTTCAGATCTTACCCAGCTGACCTCTTCTCAGTCAGACCGCCCTTACCACCCTGCCAAAGACCCCTGCCCTCCTGTTGGGGGG  
GAAGTCTAGAATGGGGTCGACTGGAGAAGAGTCAGTCTGGCGGGGAATGGTGGGACGGTTTCTGGGGACGGGAGGACAACCCCC

170

PRKN

PRKN-206

CACTGTCAACACCATCCCATCTCTCGAGGGGGAGGCACTGCCATTCCCTCTGCAGGGGGCCTGCCCTGTGGATGGCCTTGAGCCCT  
GTGACAGTTGTGGTAGGGTAGAGAGCTCCCCCTCCGTGACGGTAAGGGAGACGTCCCCCGGACGGACACCTACCGGAACCTCGGGA

255

PRKN

PRKN-206

CTGGGAAATCACCTCTGCCAAGACAATTAGTTCTGGCTCCCTCCCTTCCCCGGAGAGCTCATGTCCCATGACTACTGGTTGGTC  
GACCCTTTAGTGGAGACGGTTCTGTTAATCAAGACCGAGGGAGGGGAAGGGGCCTCTCGAGTACAGGGTACTGATGACCAACCAG

340

PRKN

PRKN-206

ATAATACCCAACCCACTAACGAAATTCAGGACCACCCTGAGAGCTGCCCATCCCCAGAGCTCCTGGACGTCAGCTCAGGCCTCT  
TATTATGGGTTGGGTGATTGCTTTAAGTCCTGGTGGGACTCTCGACGGGGTAGGGGTCTCGAGGACCTGCAGTTCGAGTCCGGAGA

425

PRKN

PRKN-206

TAGGCTGTGCCGAGCTGGGCTTCTCCTCTGCCAGTCTGCCCTCCTCCCTTTCCATCTCAGTGTCTGCTTCCCCCTTTACCCAA  
ATCCGACACGGGCTCGACCCGAAGAGGAGACGGGTGACAGCGGGAGGAGGGAAAGGTAGAGTACAGACGAAGGGGGAAATGGGTT

510

PRKN

PRKN-206

CGAGTCCCACCCACCAGTTTAATAATAATTTATAGCACCACCTTCCCTCCCAGATCATTGCTTAATTTGTTCAATTTACATGTTCC  
GCTCAGGGTGGGTGGTCAAATTATTATTAAAGTATCGTGGTGAAGGAAGGGTCTAGTAACGAATTAACAAGTAAATGTACAAGG

595

PRKN

PRKN-206

CCATCTGTGCTCTTTAGAACATAAGCCGGTGAGATCAGGGACCTTGACCGTCTAGGCTCCAATCCCAGAAGAGAGCCCGGACAA  
GGTAGACAGCGAGAAATCTTGTATTTCGGCCACTCTAGTCCCTGGAAGTGGCAGATCCGAGGTTAGGGTCTTCTCTCGGGCCTGTT

680

PRKN

PRKN-206

AAAAATTTGCTGAATTAACACTTAGCTTGTAGGCCGGGCGTGGTACTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGC  
TTTTATAAACGACTTAATTTTGAATCGAACATCCGGCCCCGACCACTGAGTGC GGACATTAGGGTCTGTGAAACCTCCGGCTCCG

765

PRKN

PRKN-206

TGGCAGATCGCTTGAGTTCAAGAATTCAGGACCAGCCTGACTAACATGGTGAACCCCTGTCTCTAGTAAAAATACAAAAAAAAA  
ACCGTCTAGCGAACTCAAGTTCTTAAGTCCTGGTCCGACTGATTGTACCACTTTGGGACAGAGATCATTTTTATGTTTTTTTTTT

850

PRKN

PRKN-206

TAGCTAGGTGTGGTGGCAGGCACCTGTGATCCCAGCTACTCGGGAGGCCGAGACACAAGAATTGGTTGAACCCAGGAGGTGGAGG  
ATCGATCCACACCACCGTCCGTGGACACTAGGGTCGATGAGCCCTCCGGCTCTGTGTTCTTAACCAACTTGGGTCTCCACCTCC

935

PRKN

PRKN-206

TTGCAGTGAGCCAAGATTGCACCATTGCACTTCGGCCTGGGTGACACAGTGAGACTCCGTCTCAAAAAGAATAAATAAACACAA  
AACGTCACTCGGTTCTAACGTGGTAACGTGAAGCCGGACCCACTGTGTCACTCTGAGGCAGAGTTTTTCTTATTTATTTTGTGTT

1020

PRKN

PRKN-206

ACACACAAAAAAGTTAGCTTGTAAAGTTTAGAGATATACACATAAACCGATCTTTTTAATAAAAATAACATAGAGGAAGCAAGCTAT  
TGTGTGTTTTTGAATCGAACATTTCAAATCTCTATATGTGTATTTGGCTAGAAAAATTATTTTATTGTATCTCCTTCGTTTCGATA

1105

PRKN

PRKN-206

CAGGGCACACAGACCCGGAGGAGGAGGCTTCTTGGGAAGAGATGATACCAGCCAAGAATTGAAGAATGAGCAGATATGAGCAAGGC  
GTCCCCTGTGTCTGGGCCTCCTCCTCCGAAGGACCTTCTCTACTATGGTCGGTTCTTAACCTTCTTACTCGTCTATACTCGTTCCG

1190

PRKN

PRKN-206

AAGGAAGAGCAGGAGGAGGCGTCCTAGGCCCCAGGACTGCATGAGCAAAGACACCGGGTGTGCGCGCGCCGGTGTGCGGAGGCAG  
TTCCTTCTCGTCTCCTCCGCAGGATCCGGGGTCTGACGTA CTGTTTTCTGTGGCCACACGCGCGCGGCCACACGCCCTCCGTC

1275

PRKN

PRKN-206

CCCCTGCTGCTCGTGTTCAGGCACCGCACGCAGGAGCCTCAGCTGAAGCAGTAGGTAGGATGCAGAATTGAGGTCCCTGAATGG  
GGGGACGACGAGCACAAGGTCCGTGGCGTGCCTCGGAGTCGACTTCGTATCCATCCTACGTCTTAACCTCCAGGGACTTACC

1360

PRKN

PRKN-206

CAGGTTTGGGGCTTGGACTTGATCCTGTGAGGCAGGCAGATATTCTAGGATGAGAAGCAGGAAAATTATTCATCGGATCTGCCCT  
GTCCAAACCCGAACCTGAACTAGGACACTCCGTCCGTCTATAAGATCCTACTCTTCGTCTTTAATAAGTAGCCTAGACGGGA

1445

PRKN

PRKN-206

GGACTCAGAACATGCTGGCAGCCTCCAAAAGATGGAGTTGTAGGAGTCAAATGGTTCGTGACTGTAGGAAAGTTTCTCCCTGTCGG  
CCTGAGTCTTGTACGACCGTCCGGAGTTTCTACCTCAACATCCTCAGTTTACCAAGCACTGACATCCTTTCAAAGAGGGACAGCC

1530

PRKN

PRKN-206

GCTATTTCTTGGAAATATTGTGATGTA CTATAAATGAAAGCACTAATTTTTTACCTCCAAATTTTTAACTTACAAACAGAAAAGC  
CGATAAAGAACCTTTATAACACTACATGATATTTACTTTTCGTGATTA AAAAATGGAGGTTTAAAAATGAATGTTTGTCTTTTCG

1615

PRKN

PRKN-206

TGAGACTTGAAGCTTATTAGCGATGGCCTAAACTGTTTTAAAAGTGCATCACTGTAACCGAAACCGACATAGCCTCTATGACCAAG  
ACTCTGAACTTCGAATAATCGCTACCGGATTTGACAAAATTTTACGTA GTGACATTGGCTTTGGCTGTATCGGAGATACTGGTTC

1700

PRKN

PRKN-206

GATGTTACCTGGTTGTCACCAAGGTTTCGTGGCCTGTTACATACTCAGCTGTGTTTTTCAGGAATGCCCTTCCTCCCTCAGAGAAGCT  
CTACAATGGACCAACAGTGGTTCCAAGCACCGGACAATGTATGAGTCGACACAAAAGTCTTACGGGAAGGAGGGAGTCTCTTCGA

1785

PRKN

PRKN-206

GAAATGAGAATGCGAGGAATTTCCATTTTAAGCACAGGCTAAACCCTGGTACTTTTCTCCTATAATCCACTCCAGTCTCCAGAAAT  
CTTTACTCTTACGCTCCTTAAAGGTAAAATTCGTGTCCGATTTGGGACCATGAAAAGAGGATATTAGGTGAGGTCTCAGAGGTCTTTA

1870

PRKN

PRKN-206

TTCTTCACTTCCATCTCAAGCAGATGAAATTCTGGCTCCATTCCCTGACTGAGTGTGTGCTTCTCCTCAAATGTGCCCTTCAGGTT  
AAGAAGTGAAGGTAGAGTTCGTCTACTTTAAGACCGAGGTAAGGGACTGACTCACACACGAAGAGGAGTTTACACGGAAGTCCAA

1955

PRKN

PRKN-206

GTTTCAGGGACTTCCACGCTCTCATTAAATCTAGTGGAAGAATTGCTGGCCGGAGCCACGATGTCGACTGCCCGGCGTAGGCTGAG  
CAAGTCCCTGAAGGTGCGAGAGTAATTTAGATCACCTTCTTAACGACCGGCCTCGGTGCTACAGCTGACGGGCCGCATCCGACTC

2040

PRKN

PRKN-206

CTTTTCATGGTTTGAAGTGTCCATCTGCAGACAGAACTCACTACAAAGGAAGCCATATTCCCTTCATGTCTATATCCACAAATCTG  
GAAAAGTACCAAACCTCACAGGTAGACGCTGTCTTGAGTGATGTTTCTTTCGGTATAAGGGGAAGTACAGATATAGGTGTTTAGAC

2125

PRKN

PRKN-206

CGTGAAGTTTTCAGCTGCTTCCCTGGATGCACTTACTTTTTAAGCTGGCAAAGCTTTTTAGAATTGCGGTCCCTCCATGCTCCTCCATGG  
GCACCTCAAAGTCGACGAAGGACCTACGTGAATGAAAATTCGACCGTTTTCGAAAATCTTAACGCCAGGAGGTACGAGGAGGTACC

2210

PRKN

PRKN-206

CCTGGGTCTAGCTCTATGGCCTTGTGTATATTAAGCCCTAGGGAGAAAAGAAAGCTAATGACGTGAATATCTTCTCTTCCCATT  
GGACCCAGATCGAGATACCGGAACACATATAATTCGGGATCCCTCTTTTCTTTTCGATTACTGCACTTATAGAAGAGAAGGGTAAA

2295

PRKN

PRKN-206

CCATTCTTACTGTACCAGGCCATTGTAATTTAGCTTCTGTACCAAGATATCATTTACAATGCTAGTATCCAGATTCAATTAAT  
GGTAAGAATGACATGGTCCGGTAACATTAAGATCGAAGACATGGTTCTATAGTAAATGTTACGATCATAGGGTCTAAGTAATTTA

2380

PRKN

PRKN-206

GCTTGGTATTAATTTTTGGCATTTCGGTCTAAGTGTAGAACAACAACATGCTTCTTCTATTCTCTCATTCAATAACAACAGTCAG  
CGAACCATTAATTAACAAACCGTAAGCCAGATTCACATCTTGTGTTGTGTACGAAGAAGATAAGAGAGTAAGTTATTGTTGTCAGTC

2465

PRKN

PRKN-206

CACAGAAGACTTCTGTGACGGAATGTGCGGGGTTTTTCCCCACGCACCAAGCAAGCAATCAGTTCTGCAGTGGACACCGGCTGA  
GTGTCTTCTGAAGACTGCCTTACACGCCCCCAAAAAGGGGTGCGTGGTTCGTTTCGTTAGTCAAGACGTCACCTGTGGCCGACT

2550

PRKN

PRKN-206

GTGTCCTGCTCTTCAACCCTGGCGCTGTCTACCAGGAAATAGTGTCTGATCCCTCAGGCTGGGGGCTCAGTCCCACAGGACTGCC  
CACAGGACGAGAAGTTGGGACCGCGACAGATGGTCCTTTATCACAGACTAGGGAGTCCGACCCCGAGTCAGGGGTGTCTGACGG

2635

PRKN

PRKN-206

ACTCACCGGTCTCAAGTCTGGGCTTCCGGAAGTTCTGATCGACTGGCTTCAAGTTGAGATTCCCATGACTCCCTCTTTGGGTTCT  
TGAGTGGCCAGAGTTTCAAGACCCGAAGGCCTTCAAGACTAGCTGACCGAAGTTCAACTCTAAGGGTACTGAGGGAGAAACCCAAGA

2720

PRKN

PRKN-206

GTTATTTGCTACAGTGGCTCACAGAACTCAGGGAAACACATTTACCAGTTTATTATAAAGGATATTACAAAAGATACAGATGAAG  
CAATAAACGATGTCACCGAGTGTCTTGAGTCCCTTTGTGTAATGGTCAAATAATATTTCTATAATGTTTTCTATGTCTACTTC

2805

PRKN

PRKN-206

AGATGCAGAGGGCGAGGTATGGGGGAAGGGTCGCGGAGCTTCCAAGCCTTCCCTGGGTGCTCCGCCCATCAGAAACCTCCATGTG  
TCTACGTCTCCCGCTCCATACCCCTTCCAGCGCCTCGAAGGTTCTGGAAGGGACCCACGAGGCGGGTAGTCTTTGGAGGTACAC

2890

PRKN

PRKN-206

TTCAGCAACCTGGAAGCTCCCAAACCTGTCTCTGGGGCCCTCTATGGAGACTTCTGGGATAGGCACGATGGAAGCATGGAC  
AAGTCGTTGGACCTTCGAGGGGTTTGGGACAGGAGACCCGGGAGATACCTCTGAAGGACCTATCCGTGCTACCTTCGTACCTG

2975

PRKN

PRKN-206

AGCCGTGTTGAAATGCGGTGGGACAGAAAGGCTTTGATCTCACGCTAAAAGATGGAGTGGGGAGACCCTGCAAGGCCTGCCGGTC  
TCGGCACAACCTTTACGCCACCCTGTCTTTCCGAAACTAGAGTGCGATTTTCTACCTCACCCCTCTGGGACGTTCCGGACGGCCAG

3060

PRKN

PRKN-206

TAGATTCTTCTTGGCCTCCCTGTGCAGCATTCTTCCCTCCAGGGGATGGACAGGACTCTTTCTGAAATCCGGGTCTTATAACCCA  
ATCTAAGAAGAACC GGAGGGACACGTCGTAAGGAAGGAGGTCCCTACCTGTCTGAGAAAGACTTTAGGCCCAGAATATTGGGT

3145

PRKN

PRKN-206

CAGTCAGAACAGCTGCGGATGGTTCCAGTCTGCCCTGGGCTGGTAAAAGGAGGGCAAGGAAAAGTCCGGAGGGAGAGATTCTCTT  
GTCAGTCTTGTGACGCCTACCAAGGTCAGGACGGGACCCGACCATTTTCTCCCCTTCTTTCCAGCCTCCCTCTCTAAGAGAA

3230

PRKN

PRKN-206

TTCTGGCGCCTGTTTCTGAGGCCTGAATTGCCCAACATTATGACAAAAGACTGTAACAAGAGCTATGGGAGTTATAAGCCAGGG  
AAGACCGCGGACAAAAGACTCCGGACTTAACGGGGTTGTAATACTGTTTTCTGACATTGTTCTCGATACCCTCAATATTCCGGTCCC

3315

PRKN

PRKN-206

ACTGTGTATGAAAAACACATCTATCAGCCAGGCGCGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCAGGCAGA  
TGACACATACTTTTTGTGTAGATAGTCGGTCCGCGCCACCGAGTACGGACATTAGGGTCTGTAACCCTCCGGTTCGGTCCGTCT

3400

PRKN

PRKN-206

TCACGAGGTCAGGAGTTTGGAGACCAGCCTGGTCAACATGGTGAACCCCGTCTCTACTAAAAATACAAAATTTAGCCAGGCGTGG  
AGTGCTCCAGTCTCTCAAACCTCTGGTCTGGACCAAGTTGTACCACTTTGGGGCAGAGATGATTTTTATGTTTTAAATCGGTCCGCACC

3485

PRKN

PRKN-206

TGGCAGGTGCCTGTAATTCCAACCTACTCGAGAGGCTGAGGCAGGAGAATTGCTTGAACCCGGGAGGCAGAGGTGGCAGTGAGCCC  
ACCGTCCACGGACATTAAGGTTGATGAGCTCTCCGACTCCGTCTCTTAACGAACTTGGGCCCTCCGTCTCCACCGTCACTCGGG

3570

PRKN

PRKN-206

AGATCGCGCCCTGTACTCCAGCCTGGGCGACAGAGCGAGACTCCATCTCAAAAAATAAAAAATAAAAAATAAAAAATATATATAT  
TCTAGCGCGGGACATGAGGTCGGACCCGCTGTCTCGCTCTGAGGTAGAGTTTTTTTTATTTTTATTTTTATTTTTATTTTTATATATATA

3655

PRKN

PRKN-206

ATATATACACACACACACACACACACACACACACTCTTCATACATATTTGTGTTTTATATATGCTTATATATATTTAAATATCAC  
TATATATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGAGAAGTATGTATAAACACAAATATATACGAATATATATAATTTATAGTG

3740

PRKN

PRKN-206

AATAGGAAAAGTTTCTTACCCTTTCATTTAGAATTGCTTTAATAGTTCATTAAGTTTTAATGTATTGCTCAATAATTTTGATTGAA  
TTATCCTTTCAAAGAATGGGAAAAGTAAATCTTAACGAAATATCAAGTAATTCAAAATTACATAACGAGTTATTAATACTAACTT

3825

PRKN

PRKN-206

TATATTTTACGATACATGATATAATAATGATATATTTATGATATGATAAAATATTTATGATATTTTAGAGAAACAAGTGGTTTTA  
ATATAAAATGCTATGTAATATATTACTATATAAAATACTATACTATTTTATAAAATACTATAAAATCTCTTTGTTCCACCAAAT

3910

PRKN

PRKN-206

TAATGTCACACCATATAACATATTATTTACATCATAAATATACAACCATGCAATATGTGCTGAAAATGGCACAACCTAAGTGGA  
ATTACAGTGTGGTATATTGTATAATAAATGTAGTATTTATATGTTGGTACGTTATACACGACTTTTACCGTGTTTGGATTACCT

3995

PRKN

PRKN-206

AAGTATGAAGATAAAAGTGTGTAAGTTTTCTCCTTTATTTTCCACAGATCTGTAATTTATGATCTTTAAAAACAAGCCAGAAAAGG  
TTCATACTTCTATTTTCAACAACATTCAAAAGAGGAAATAAAAGGTGTCTAGACATTAATACTAGAAATTTGTTCCGGTCTTTCC

4080

PRKN

PRKN-206

ATTAGGAAAACAGGAGATTTTGCATGTCGGCAAGTTATCTTAAAACAAATGCCTATTCCTATATATTCATAAAATTTTTAAATTA  
TAATCCTTTTGTCTCTAAAACGTACAGCCGTTCAATAGAAATTTGTTTACGGATAAGGATATATAAGTATTTATAAAATTTAAT

4165

PRKN

PRKN-206

GTGAAAGTTCTCATGCCAGGTTTCTAATAATAAAAGTGAGACAGCACCGAACCAATTACTTGGAAAATTTGGCAGGAAAAATCAA  
CACTTTCAAGAGTACGGTCCAAAAGATTATTATTTTCACTCTGTCTGGCTTGGTTAATGAACCTTTTAAACCGTCTTTTATAGTT

4250

PRKN

PRKN-206

TTAACAAGATAATTGGTAAGAGTGAGTAATGGAGCACCTTCAACGCTAGGTGGGATTCAAGCAAAGAAACTGCGTTTTGCCGGGGT  
AATTGTTCTATTAACCATTCTCACTCATTACCTCGTGGAAAGTTGCGATCCACCCTAAGTTCGTTTTCTTTGACGCAAACGGCCCCA

4335

PRKN

PRKN-206

TTTCCAGGAAATTTGGACAGAAACAGTTCTCTGTACATCCTCATACAAATCACTTCCTCCTCCCTTCAGTTCCCCACAGCGACT  
AAAGGTCCTTTAAACCTGTCTTTGTCAAGAGACATGTAGGAGTATGTTTAGTGAAGGAGGAGGGAAAGTCAAGGGGGTGTCTGCTGA

4420

PRKN

PRKN-206

GAAGCAGGGCTGTGTGCACTCCAGAAACTCATGGAGTCTATGTTTTAAACAAGTGAGGGAGGTGAATAATTCCAAAATAAGTTCCAA  
CTTCGTCCCGACACACGTGAGGTCTTTGAGTACCTCAGATACAAATTGTTCACTCCCTCCACTTATTAAGGTTTTATTCAAGGTT

4505

PRKN

PRKN-206

GATAAGGGACTTTTTCTCTTATGCTGAAAATAACCTGTTCTGTGAATGACAGGACATTGGAATCACACAGACCTTGGTGAGATCA  
CTATTCCTGAAAAGGAGAATACGACTTTTTATTGGACAAGACACTTACTGTCTGTAACCTTAGTGTGTCTGGAACCACTCTAGT

4590

PRKN

PRKN-206

TTGTCTTCACCATTTAAAAGTGCTTCACCTTGGGGAAATTTCTATAGCAGAGTGATGCTCTTATCTCAAAGTGCTTTGGGAAGCAA  
AACAGAAGTGGTAAATTTTACGAAGTGGAAACCCCTTTAAGATATCGTCTCACTACGAGAATAGAGTTTTACGAAACCCCTTCGTT

4675

PRKN

PRKN-206

ATGAGATAATACATAGAACACCTAGCATTATTAATTACTTTCCTTTCTATCCCTCTCATCTTAATTAATAATTTTGGATAGCATT  
TACTCTATTATATGTATCTTGTGGATCGTAATAATTAATGAAGGAAAAGATAGGGAGAGTAGAATTAATTTTAAAACCTATCGTAA

4760

PRKN

PRKN-206

AAGGAACATATTCCTATTAATAATAATATGCTGGCTGGGTGCGGTAGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGG  
TTCCTTGATAAAGGATAATTTTATTATACGACCGACCCACGCCATCGAGTGCAGGACATTAGGGTCGTGAAACCCCTCCGGCTCC

4845

PRKN

PRKN-206

CGGGAGGATGACTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGCAAAAACCTGTCTCTACGAAAAATTCAAAAATTAG  
GCCCTCCTACTGAACTCCAGTCCCTCAAACCTCTGGTCGGACCGGTTGTACCGTTTTGGGACAGAGATGCTTTTTAAGTTTTTAATC

4930

PRKN

PRKN-206

CTGGGCATGTTGGTGGGCGCCTGTAATCCCAGCTACTCGGGAGGCTGAGGCCAGAGAATCACTTGAACCTGGGAGGTGGGGGTTG  
GACCCGTACAACCACCCGCGGACATTAGGGTCGATGAGCCCTCCGACTCCGGTCTCTTAGTGAACCTTGGACCTCCACCCCCAAC

5015

PRKN

PRKN-206

CAGTGAGCCAAGATCTCGCCACTGCACTCCAGCCTGGACGACAAGAGCAAACCTCCATCTCAAAAAAAAAAATAGAAATAATAAT  
GTCCTCGGTTCTAGAGCGGTGACGTGAGGTCGGACCTGCTGTTCTCGTTTTGAGGTAGAGTTTTTTTTTTTATCTTTATTATTA

5100

PRKN

PRKN-206

AATTACAATATGCTATCCCAGTTCCTGTTTTATGAATTTGGCCAAGCCAAGTAAGTGCCACTATAGAAAAGAGCAAAAATAAATCA  
TTAATGTTATACGATAGGGTCAAGGACAAAATACTTAAACC GGTTTCGGTTCATTACACCGTGATATCTTTCTCGTTTTTATTAGT

5185

PRKN

PRKN-206

AAATATATTTAAATTATTATACATTATATTAGGTTATATCATCAAAATTTTATCAATATATTTAAATATAAATATATTTTATATATA  
TTTATATAAATTTAATAATATGTAATATAATCCAATATAGTAGTTTAAAATAGTTATATAAATTTATATTTATATAAATATATAT

5270

PRKN

PRKN-206

TTTTAAATATAAATATATAAAAAATATATTTTATATATATTTTAAATATAAATATATAAAAAATATATTTTATATATATTTTAAATATA  
AAAATTTATATTTTATATATTTTATATAAATATATATAAAAATTTATATTTTATATATTTTATATAAATATATATAAAAATTTATAT

5355

PRKN

PRKN-206

AATATATAAAATATATTTTATATATATTTTAAATATAAATATATAAAATATATTTTATATATATTTTAAATATAAATATATAAAATA  
TTATATATTTTATATAAATATATATAAAAATTTATATTTTATATATTTTATATAAATATATATAAAAATTTATATTTTATATATTTTAT

5440

PRKN

PRKN-206

TATTTATATATATTTTAAATATAAATATATAAAAAATATATTTTATATATATTTTAAATATAAATATATAAAAAATATATTTTATATATAT  
ATAAATATATATAAAAATTTATATTTTATATATTTTATATAAATATATATAAAAATTTATATTTTATATATTTTATATAAATATATATA

5525

PRKN

PRKN-206

TTTTAAATATAAATATATAAAAAATATATATATTTTAAATATAAATATATAAAAAATATATATATTTTAAATATAAATATATAAAAAAT  
AAAATTTATATTTTATATATTTTATATATATAAAAATTTATATTTTATATATTTTATATATATAAAAATTTATATTTTATATATTTTATA

5610

PRKN

PRKN-206

ATATATATTTTAAATATAAATATATAAAAAATATATATATTTTAAATATAAATATATAAAAAATATATATATTTTAAATATAAATAT  
TATATATAAAAATTTATATTTTATATATATTTTATATATATAAAAATTTATATTTTATATATATTTTATATATATAAAAATTTATATTTATA

5695

PRKN

PRKN-206

ATAAAAAATATATATATTTTAAATATAAATATATAAAAAATATATATATTTTAAATATAAATATATAAAAAATATATATATTTTAAAT  
TATTTTATATATATAAAAATTTATATTTTATATATATTTTATATATATAAAAATTTATATTTTATATATATTTTATATATATAAAAATTTA

5780

PRKN

PRKN-206

ATAAATATATAAAAAATATATATATTTTAAATATAAATATATAAAAAATATATTTTATATATTTTAAATATAAATATATTAATATTTG  
TATTTTATATATTTTATATATATAAAAATTTATATTTTATATATTTTATATAAATATATAAAAATTTATATTTTATATAAATTATAAAC

5865

PRKN

PRKN-206



PCR Forward

ttgtctctaaatcccctttcaggag

AATATATTTAAATGAGGAATTGACCCCTATCTATGAAACATGAAGTGTGTTGCTCTAAATCCCCTTTTCAGGAGAATAAAGTCAGA  
TTATATAAATTTACTCCTTAACTGGGGATAGATACTTTGTACTTACAAAACAGAGATTTAGGGGAAAAGTCCTCTTATTTTCAGTCT

5950

PRKN

PRKN-206

TTTACAAATAAAATTTGTTCCCGACAAAAGTGACATGCTTCAATTTCAATTCATTTCTTAATGAATATCATCACTTTAGAGCTGCC  
AAATGTTTATTTTAAACAAGGGCTGTTTTCACTGTACGAAGTTAAAGTAAGTAAAGAATTACTTATAGTAGTGAAATCTCGACGG

6035

PRKN

PRKN-206

Sanger Sequencing Primer

ctgcccttgattgcttg

CTATTGTGCTTTATGAAGTTTTTCCCCTCAGTTAAGTTTTCTCTGCCCCTTGATTGCTTGTGATTATTCGCTCAGAAAAGTGATG  
GATAACACGAAATACTTCAAAAAGGGGAGTCAATTCAAAGAGAGACGGGAACATAACGAACACTAATAAGCGAGTCTTTCACTAC

6120

PRKN

PRKN-206

Donor Template WT -> SNV

accacaccttggtttctgcccccaaca

TCTAGGCTAGCGTGCTGGTTTTGGGAATGCGTGTTCAGGTAAGTGGCTGCGAACCCACCACACCTTTGTTTTCTGCCCCCAACA  
AGATCCGATCGCACGACCAACCCCTTACGCACAAAAGGTCCATGAACGACGCTTGGGTGGTGTGGAACAAAAGACGGGGGTTGT

6205

PRKN

PRKN-206

Donor Template WT -> SNV

gGAGGCTGCATGCACATGAAGTGTCGCAGCCCCAATGCAGGCTCGAGTGGTGGTGGAACTGTGGCTGCGAG  
GGAGGCTGCATGCACATGAAGTGTCGCAGCCCCAGTGCAGGCTCGAGTGGTGGTGGAACTGTGGCTGCGAGTGGAAACCGCGTCT  
CCTCCGACGTACGTGTACTTACAGCGTTCGGGGTACGTCCGAGCTCACCACGACCTTGACACCGACGCTCACCTTGGCGCAGA

6290

PRKN

PRKN-206

430 G C M H M K C P Q P Q 435 440 C R L E W C W N C 445 450 G C E W N R V 455

ENSE00001442933

PRKN-206

Donor Template WT -> SNV

SNV

PAM

gRNA Protospacer Sequence

Silent SNV

T C A C G T C C G A G C T C A C C A C G

gRNA Protospacer

GCATGGGGGACCACTGGTTTCGACGTGTAGCCAGGGCGGCCGGGGCGCCCCATCGCCACATCCTGGGGGAGCATAACCCAGTGTCTAC  
CGTACCCCTGGTGACCAAGCTGCACATCGGTCCC GCCGGCCCGGGGTAGCGGTGTAGGACCCCTCGTATGGGTACAGATG

6375

PRKN

PRKN-206

460 C M G D H W F D V 465

ENSE00001442933

PRKN-206

CTTCATTTTCTAATTCTCTTTTCAAACACACACACACACGCGCGCGCGCGCACACACACTCTTCAAGTTTTTTTTCAAAGTCCAAC  
GAAGTAAAAGATTAAGAGAAAAAGTTTGTGTGTGTGTGTGCGCGCGCGCGCGTGTGTGTGAGAAGTTCAAAAAAAGTTTCAGGTTG

6460

PRKN

PRKN-206

TACAGCCAAATTGCAGAAGAACTCCTGGATCCCTTTCACTATGTCCATGAAAAACAGCAGAGTAAAATTACAGAAGAAGCTCCT  
ATGTCGGTTTAACGTCTTCTTTGAGGACCTAGGGAAAAGTGATACAGGTACTTTTTGTCGTCTCATTTTAATGTCTTCTTCGAGGA

6545

PRKN

PRKN-206

GAATCCCTTTTTCAGTTTGTCCACACAAGACAGCAGAGCCATCTGCGACACCACCAACAGGCGTTCTCAGCCTCCGGATGACACAAA  
CTTAGGGAAAGTCAAACAGGTGTGTTCTGTCTCGGTAGACGCTGTGGTGGTTGTCCGCAAGAGTCGGAGGCCTACTGTGTTT

6630

PRKN

PRKN-206

TACCAGAGCACAGATTCAAGTGCAATCCATGTATCTGTATGGGTCATTCTCACCTGAATTCGAGACAGGCAGAATCAGTAGCTGG  
ATGGTCTCGTGTCTAAGTTCACGTTAGGTACATAGACATACCCAGTAAGAGTGGACTTAAGCTCTGTCCGTCTTAGTCATCGACC

6715

PRKN

PRKN-206

AGAGAGAGTTCTCACATTTAATATCCTGCCTTTTACCTTCAGTAAACACCATGAAGATGCCATTGACAAGGTGTTTCTCTGTAAA  
TCTCTCTCAAGAGTGTAATTATAGGACGGAAAATGGAAGTCATTTGTGGTACTTCTACGGTAACTGTTCCACAAAGAGACATTT

6800

PRKN

PRKN-206

GACATTT  
PCR Reverse

ATGAACTGCAGTGGGTTCTCCAACTAGATTCATGGCTTTAACAGTAATGTTCTTATTTAAATTTTCAGAAAGCATCTATTCCCA  
TACTTGACGTCACCCAAGAGGTTTGATCTAAGTACCGAAATTGTCATTACAAGAATAAATTTAAAAGTCTTTCGTAGATAAGGGT

6885

PRKN

PRKN-206

TACTTGACGTCACCCAAG

PCR Reverse

AAGAACCCCAGGCAATAGTCAAAAACATTTGTTTATCCTTAAGAATTCCATCTATATAAATCGCATTAAATGAAATACCAACTATG  
TTCTTGGGGTCCGTTATCAGTTTTGTAAACAAATAGGAATTCTTAAGGTAGATATATTTAGCGTAATTACTTTATGGTTGATAC

6970

PRKN

PRKN-206

CGTAAATCAACTTGTCCACAAAGTGAGAAATTATGAAAGTTAATTTGAATGTTGAATGTTTGAATTACAGGGAAGAAATCAAGTTA  
GCATTTAGTTGAACAGTGTTTCACTCTTTAATACTTTCAATTAACCTTACAACCTTACAACTTAATGTCCCTTCTTTAGTTCAAT

7055

PRKN

PRKN-206

ATGTACTTTTATTCCCTTTTCATGATTTGCAACTTTAGAAAAGAAATGTTTTTCTGAAAGTATCACCAAAAAATCTATAGTTTGAT  
TACATGAAAGTAAGGGAAAAGTACTAAACGTTGAAATCTTTCTTTAACAAAAAGACTTTTCATAGTGGTTTTTTAGATATCAAACCTA

7140

PRKN

PRKN-206

TCTGAGTATTCATTTTGCACCTTGGAGATTTTGCTAATACATTTGGCTCCACTGTAAATTTAATAGATAAAAGTGCCTATAAAAGGA  
AGACTCATAAGTAAAACGTTGAACCTCTAAAACGATTATGTAAACCGAGGTGACATTTAAATTATCTATTTTACGGATATTTTCT

7225

PRKN

PRKN-206

AACACGTTTAGAAATGATTTCAAAATGATATTCAATCTTAACAAAAGTGAACATTATTAAATCAGAATCTTTAAAGAGGAGCCTT  
TTGTGCAAAATCTTTACTAAAGTTTTACTATAAGTTAGAATTGTTTTCACTTGTAAATAATTTAGTCTTAGAAATTTCTCCTCGGAA

7310

PRKN

PRKN-206

TCCAGAACTACCAAAATGAAGACACGCCCGACTCTCTCCATCAGAAGGGTTTATACCCCTTTGGCACACCCCTCTCTGTCCAATCT  
AGGTCTTGATGGTTTTACTTCTGTGCGGGCTGAGAGAGGTAGTCTTCCCAAATATGGGGAAACCGTGTGGGAGAGACAGGTTAGA

7395

PRKN

PRKN-206

GCAAGTCCCAGGGAGCTCTGCATACCAGGGGTTCCCCAGGAGAGACCTTCTCTTAGGACAGTAAACTCACTAGAATATTCCTTAT  
CGTTCAGGGTCCCTCGAGACGTATGGTCCCCAAGGGGTCCTCTCTGGAAGAGAATCCTGTCAATTTGAGTGATCTTATAAGGAATA

7480

PRKN

PRKN-206

GTTGACATGGATTGGATTTTCAGTTCAATCAAACCTTTTCAGCTTTTTTTTCAGCCATTACACAACAATCAAAAGATTAACAACACT  
CAAAGTGTACCTAACCTAAAGTCAAGTTAGTTTGAAGTGCAGAAAAAAGTTCGGTAAGTGTGTGTAGTTTTCTAATTGTTGTGA

7565

PRKN

PRKN-206

GCATGCGGCAAACCGCATGCTCTTACCCACACTACGCAGAAGAGAAAGTACAACCACTATCTTTTTGTTCTACCTGTATTGTCTGA  
CGTACGCCGTTTGGCGTACGAGAATGGGTGTGATGCGTCTTCTCTTTCATGTTGGTGATAGAAAAACAAGATGGACATAACAGACT

7650

PRKN

PRKN-206

CTTCTCAGGAAGATCGTGAACATAACTGAGGGCATGAGTCTCACTAGCACATGGAGGCCCTTTTGGATTTAGAGACTGTAAATTA  
GAAGAGTCCTTCTAGCACTTGTATTGACTCCCGTACTCAGAGTGATCGTGTACCTCCGGGAAAACCTAAATCTCTGACATTTAAT

7735

PRKN

PRKN-206

TTAAATCGGCAACAGGGCTTCTCTTTTTAGATGTAGCACTGAAATCCTTGCTGGAGGGGAAGAGAGGGGGATGAACTCAAGTTTTCC  
AATTTAGCCGTTGTCCCAGAGAAAAATCTACATCGTGACTTTAGGAACGACCTCCCTTCTCTCCCTACTTGAGTTCAAAGG

7820

PRKN

PRKN-206

ACATCCTGGGACACCTGTCCCTCTTTTCTAACTGCCTAAGATAACCCATTTCTTCCAACCATCTGAGGACAGTCCCGTCTGTCTC  
TGTAGGACCCTGTGGACAGGGAGAAAAGGATTGACGGATTCTATTGGGTAAAGAAGGTTGGTAGACTCTGTACAGGGCAGCAGAG

7905

PRKN

PRKN-206

AGAGGCCCTGCACCGGGGAGAGACTGGGCTCTGCAGCAGCCACATCAGCATTACAGCTTCATGTGGCTTCACTGTCTGAAAATC  
TCTCCGGGACGTGGCCCTCTCTGACCCGAGACGTCGTCGGTGTAGTCGTAAGTGTGGAAGTACACCGAAGTGACAGACTTTTAG

7990

PRKN

PRKN-206

TACCGACTCCAACATGGCCCCACGGTGACAACAGACCTGTGACAGGAAGCCCAAAGCTCACATAGAAATGGTGGACAGATCAAAG  
ATGGCTGAGGTTGTACCGGGGTGCCACTGTTGTCTGGACACTGTCCTTCGGGTTTTCGAGTGTATCTTTACCACCTGTCTAGTTTC

8075

PRKN

PRKN-206

TCTCTATAGTAAGGGAAAAAAGAGAGGTGGCAGGCATGAGCCCCCTGCACCCAGTGGCTCGTGTCCATACTGAGTCCAGACCCT  
AGAGATATCATTCCCTTTTTTCTCTCCACCGTCCGTAICTCGGGGGACGTGGGTACCCGAGCACAGGTATGACTCAGGTCTGGGA

8160

PRKN

PRKN-206

GATCAAGGCCTGACTTAGTGTCACTGGCAGTCCCACTAAATTACACTTCCTTACACTGGCCCGATGCGACAAATCAGGTGGCTCC  
CTAGTTCCGGACTGAATCACAGTGACCGTCAGGGTGATTTAATGTGAAGGAATGTGACCGGGCTACGCTGTTTAGTCCACCGAGG

8245

PRKN

PRKN-206

CTTCTGTCACGTGGAGCACACAGTGTTCATCATCCATAGCTTTCTTCTGATGGTGTTCATTATTGCGCCTTCCCAATCT  
GAAGACAGTGCACCTCGTGTGTCACAAAAGGTAGTAGGTATCGAAAGAAGGACTACCACAAACGTAATAACGCGGAAGGGTTAGA

8330

PRKN

PRKN-206

GCATGCTGCGTTGGGCTTGCGGTGCCTGAACAAGGTTTGCTCCCATGAGCTCAGGCACCCTAGGATCCCCTGTTAGACTATTAGG  
CGTACGACGCAACCCGAACGCCACGGACTTGTTCAAAACGAGGGTACTCGAGTCCGTGGGATCCTAGGGGACAATCTGATAATCC

8415

PRKN

PRKN-206

CTGTCCAGCATGGTCTCCTTTCCCTTCTTGGTGGTGGTCTTTTCCCTTTCCAGAATAGAACAGTGATTCTTAAAAAAGTTAGAG  
GACAGGTCGTACCAGAGGAAAAGGGAAGAACCACCACAGAAAAGGGAAAAGGTCTTATCTTGTCACTAAGAATTTTATTCAATCTC

8500

PRKN

PRKN-206

CAGGCCGGGCGCGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGTGGATCACGAGGTCAGGAGTTCAAGAC  
GTCCGGCCCGCGCCACCGAGTACGGACATTAGGGTCGTGAAACCTCCGGCTCCACCCACCTAGTGCTCCAGTCCCTCAAGTTCTG

8585

PRKN

PRKN-206

CAGCCTGGCCAAGATGATGAAACCCGCTCTATTAAAAATACAAAAATTAGCTGGGCGTGGTGGCAGGCACCTGTAATCCCAGC  
GTCGGACCGTTCTACTACTTTGGGGCAGAGATAATTTTTATGTTTTTAATCGACCCGCACCACCGTCCGTGGACATTAGGGTCG

8670

PRKN

PRKN-206

TTCTGGGAGGCTGAGGCAGGAGAATCACTTGAACCCGGGGGGCAGAGGTTGCAGTGAGCCGAGATCACGCCACTGAACTCCAGC  
AAGGACCCTCCGACTCCGTCTCTTAGTGAACCTTGGGCCCCCGTCTCCAACGTCACCTCGGCTCTAGTGCGGTGACTTGAGGTCG

8755

PRKN

PRKN-206

CTGGGCAACAGAGTGAGACTCTGTCTCAAAAAAAAAAAAAAAAAACAAAAACAAAAAAGCAAGATCATCCACTACACATGAACATGA  
GACCCGTTGTCTCACTCTGAGACAGAGTTTTTTTTTTTTTTTTTTTTGTTTTTGTTCGTTCTAGTAGGTGATGTGTACTTGTACT

8840

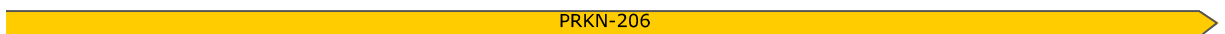
PRKN

PRKN-206







ATCACAGTATTATTTGCACAGGAAGGGTGTAAACAAAATATGAATGTATCAAAAAATAGAAATAAAGTCTTTGCAGAAAAAGTCTG  
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TAGTGTCATAATAAACGTGTCCTTCCCACATTGTTTTATACTTACATAGTTTTTTTATCTTTATTTTCAGAAACGTCTTTTTTCAGAC



TTTTTCTCTGAAGTGTGTTGAGATTATCTGACAACCTCTAAGATTGTACTTAAATTGTCAATAAAGCATCAAAAGAG 3 '  
----- 9001  
AAAAAGAGACTTCACACAACCTCTAATAGACTGTTGAGATTCTAACATGAATTTAACAGTTATTTTCGTAGTTTTTCTC 5 '



Feature	Location	Size			Type
<b>PACRG</b>	1 .. 9001	9001 bp			gene
/note	= gene <a href="#">ENSG00000112530</a> Protein coding				
<b>PRKN</b>	1 .. 9001	9001 bp			gene
/note	= gene <a href="#">ENSG00000185345</a> Protein coding				
<b>PACRG-201</b>	1 .. 9001	9001 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000337019</a> Protein coding				
<b>PACRG-203</b>	1 .. 9001	9001 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000366889</a> Protein coding				
<b>PRKN-206</b>	1 .. 9001	9001 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000366898</a>				
<b>PRKN-212</b>	1 .. 8811	8811 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000673871</a> Nonsense mediated decay				
<b>PRKN-213</b>	1 .. 8811	8811 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000674006</a> protein_coding_CDS_not_defined				
<b>PRKN-221</b>	1 .. 8811	8811 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000674436</a> protein_coding_CDS_not_defined				
<b>PRKN-204</b>	1 .. 7779	7779 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000366896</a>				
<b>PRKN-205</b>	1 .. 7779	7779 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000366897</a>				
<b>PRKN-201</b>	1 .. 6319	6319 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000338468</a> Nonsense mediated decay				
<b>PRKN-203</b>	1 .. 6319	6319 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000366894</a> Nonsense mediated decay				
<b>PRKN-207</b>	1 .. 6319	6319 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000479615</a> Nonsense mediated decay				
<b>PRKN-208</b>	1 .. 6319	6319 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000610470</a>				
	1068 .. 2739	1672 bp			gene
/note	= gene <a href="#">ENSG00000286498</a> lncRNA				
	1068 .. 2739	1672 bp			prim_transcript
/note	= primary transcript <a href="#">ENST00000660049</a> lncRNA				
<b>Donor Template WT -&gt; SNV</b>	6178 .. 6277	100 bp			misc_feature
<b>PRKN-204</b>	6207 .. 6319	113 bp			CDS
/codon_start	= 1				
/note	= coding sequence <a href="#">ENSP00000355862</a>				
/translation	= GCMHMKCPQPQCRLEWCWNCGEWNRVCMGDHWFVDV* 36 amino acids = 4.4 kDa				
<b>PRKN-205</b>	6207 .. 6319	113 bp			CDS
/codon_start	= 1				
/note	= coding sequence <a href="#">ENSP00000355863</a>				
/translation	= GCMHMKCPQPQCRLEWCWNCGEWNRVCMGDHWFVDV* 36 amino acids = 4.4 kDa				

Feature	Location	Size		Start	Type
✓ <b>PRKN-206</b>	6207 .. 6319	113 bp		→	CDS
/codon_start	= 1				
/note	= coding sequence <a href="#">ENSP00000355865</a>				
/translation	= GCMHMKCPQPQCRLEWCWNCGCEWNRVCMGDHWFDV*				
	36 amino acids = 4.4 kDa				
<b>PRKN-208</b>	6207 .. 6319	113 bp		→	CDS
/codon_start	= 1				
/note	= coding sequence <a href="#">ENSP00000483773</a>				
/translation	= GCMHMKCPQPQCRLEWCWNCGCEWNRVCMGDHWFDV*				
	36 amino acids = 4.4 kDa				
✓ <b>SNV</b>	6231 .. 6231	1 bp		⊢	misc_feature
/note	= WT = C SNV = T				
✓ <b>PAM</b>	6236 .. 6238	3 bp		⊢	misc_feature
✓ <b>gRNA Protospacer Sequence</b>	6239 .. 6259	21 bp		⊢	misc_feature
✓ <b>Silent SNV</b>	6241 .. 6241	1 bp		⊢	misc_feature
/note	= WT = G Silent SNV = A				

Primer	Length	Binding Sites	Tm	Date Added
✓ <b>PCR Forward</b> /sequence = ttgtctctaaatcccctttcaggag 44% GC / 7583.0 Da	25-mer	5914 .. 5938	58°C	Mar 7, 2023
✓ <b>Sanger Sequencing Primer</b> /sequence = ctgcccttgattgcttg 50% GC / 6081.0 Da	20-mer	6079 .. 6098	57°C	Mar 7, 2023
✓ <b>Donor Template WT -&gt; SNV</b> /sequence = accacaccttgttttctgcccccaacagGAGGCTGCATGCACATGAAGTGTCTGCAGCCCCAATGCAGGCTCGAGTGGTGCTGGAACGTGGCT 58% GC / 30,828.0 Da	100-mer	6178 .. 6277	81°C	Mar 7, 2023
✓ <b>gRNA Protospacer</b> /sequence = GCACCACTCGAGCCTGCACT 65% GC / 6022.9 Da	20-mer	6240 .. 6259	64°C	Mar 7, 2023
✓ <b>PCR Reverse</b> /sequence = GAACCACTGCAGTTCATTTTACAG 44% GC / 7601.0 Da	25-mer	6794 .. 6818	58°C	Mar 7, 2023