**No. 1**

**Mutation Spots Location: 32**

**Mutation Sequence: TATTGCCACTAGTCTCTAGTCAGTG**

**Mutation Spots: T to C**

**No. 2**

**Mutation Spots Location: 40**

**Mutation Sequence: CTAGTCTCTAGTCAGTGTGTTAATC**

**Mutation Spots: C to A**

**No. 3**

**Mutation Spots Location: 50**

**Mutation Sequence: GTCAGTGTGTTAATCTTACAACCAG**

**Mutation Spots: A to G**

**No. 4**

**Mutation Spots Location: 106**

**Mutation Sequence: TTCACACGTGGTGTTTATTACCCTG**

**Mutation Spots: G to A**

**No. 5**

**Mutation Spots Location: 151**

**Mutation Sequence: GTTTTACATTCAACTCAGGACTTGT**

**Mutation Spots: A to G**

**No. 6**

**Mutation Spots Location: 172**

**Mutation Sequence: TTGTTCTTACCTTTCTTTTCCAATG**

**Mutation Spots: T to C**

**No. 7**

**Mutation Spots Location: 173**

**Mutation Sequence: TGTTCTTACCTTTCTTTTCCAATGT**

**Mutation Spots: T to G**

**No. 8**

**Mutation Spots Location: 185**

**Mutation Sequence: TCTTTTCCAATGTTACTTGGTTCCA**

**Mutation Spots: T to C**

**No. 9**

**Mutation Spots Location: 192**

**Mutation Sequence: CAATGTTACTTGGTTCCATGCTATA**

**Mutation Spots: G to A**

**No. 10**

**Mutation Spots Location: 200**

**Mutation Sequence: CTTGGTTCCATGCTATACATGTCTC**

**Mutation Spots: C to T**

**No. 11**

**Mutation Spots Location: 213**

**Mutation Sequence: TATACATGTCTCTGGGACCAATGGT**

**Mutation Spots: T to G**

**No. 12**

**Mutation Spots Location: 216**

**Mutation Sequence: ACATGTCTCTGGGACCAATGGTACT**

**Mutation Spots: G to A**

**No. 13**

**Mutation Spots Location: 221**

**Mutation Sequence: TCTCTGGGACCAATGGTACTAAGAG**

**Mutation Spots: A to G**

**No. 14**

**Mutation Spots Location: 225**

**Mutation Sequence: TGGGACCAATGGTACTAAGAGGTTT**

**Mutation Spots: T to C**

**No. 15**

**Mutation Spots Location: 229**

**Mutation Sequence: ACCAATGGTACTAAGAGGTTTGATA**

**Mutation Spots: A to G**

**No. 16**

**Mutation Spots Location: 246**

**Mutation Sequence: GTTTGATAACCCTGTCCTACCATTT**

**Mutation Spots: T to C**

**No. 17**

**Mutation Spots Location: 292**

**Mutation Sequence: TCCACTGAGAAGTCTAACATAATAA**

**Mutation Spots: T to C**

**No. 18**

**Mutation Spots Location: 294**

**Mutation Sequence: CACTGAGAAGTCTAACATAATAAGA**

**Mutation Spots: T to C**

**No. 19**

**Mutation Spots Location: 303**

**Mutation Sequence: GTCTAACATAATAAGAGGCTGGATT**

**Mutation Spots: A to G**

**No. 20**

**Mutation Spots Location: 309**

**Mutation Sequence: CATAATAAGAGGCTGGATTTTTGGT**

**Mutation Spots: C to T**

**No. 21**

**Mutation Spots Location: 337**

**Mutation Sequence: ACTTTAGATTCGAAGACCCAGTCCC**

**Mutation Spots: A to G**

**No. 22**

**Mutation Spots Location: 351**

**Mutation Sequence: GACCCAGTCCCTACTTATTGTTAAT**

**Mutation Spots: A to G**

**No. 23**

**Mutation Spots Location: 400**

**Mutation Sequence: GTCTGTGAATTTCAATTTTGTAATG**

**Mutation Spots: C to A**

**No. 24**

**Mutation Spots Location: 421**

**Mutation Sequence: AATGATCCATTTTTGGGTGTTTATT**

**Mutation Spots: T to C**

**No. 25**

**Mutation Spots Location: 422**

**Mutation Sequence: ATGATCCATTTTTGGGTGTTTATTA**

**Mutation Spots: T to C**

**No. 26**

**Mutation Spots Location: 457**

**Mutation Sequence: AACAAAAGTTGGATGGAAAGTGAGT**

**Mutation Spots: A to C**

**No. 27**

**Mutation Spots Location: 463**

**Mutation Sequence: AGTTGGATGGAAAGTGAGTTCAGAG**

**Mutation Spots: A to G**

**No. 28**

**Mutation Spots Location: 493**

**Mutation Sequence: TCTAGTGCGAATAATTGCACTTTTG**

**Mutation Spots: A to G**

**No. 29**

**Mutation Spots Location: 526**

**Mutation Sequence: TCTCAGCCTTTTCTTATGGACCTTG**

**Mutation Spots: C to T**

**No. 30**

**Mutation Spots Location: 560**

**Mutation Sequence: AGGGTAATTTCAAAAATCTTAGGGA**

**Mutation Spots: A to G**

**No. 31**

**Mutation Spots Location: 564**

**Mutation Sequence: TAATTTCAAAAATCTTAGGGAATTT**

**Mutation Spots: T to C**

**No. 32**

**Mutation Spots Location: 565**

**Mutation Sequence: AATTTCAAAAATCTTAGGGAATTTG**

**Mutation Spots: C to T**

**No. 33**

**Mutation Spots Location: 572**

**Mutation Sequence: AAAATCTTAGGGAATTTGTGTTTAA**

**Mutation Spots: A to G**

**No. 34**

**Mutation Spots Location: 580**

**Mutation Sequence: AGGGAATTTGTGTTTAAGAATATTG**

**Mutation Spots: T to G**

**No. 35**

**Mutation Spots Location: 589**

**Mutation Sequence: GTGTTTAAGAATATTGATGGTTATT**

**Mutation Spots: A to T**

**No. 36**

**Mutation Spots Location: 638**

**Mutation Sequence: CTATTAATTTAGTGCGTGATCTCCC**

**Mutation Spots: T to C**

**No. 37**

**Mutation Spots Location: 659**

**Mutation Sequence: TCCCTCAGGGTTTTTCGGCTTTAGA**

**Mutation Spots: T to C**

**No. 38**

**Mutation Spots Location: 684**

**Mutation Sequence: ACCATTGGTAGATTTGCCAATAGGT**

**Mutation Spots: T to C**

**No. 39**

**Mutation Spots Location: 731**

**Mutation Sequence: CTTTACTTGCTTTACATAGAAGTTA**

**Mutation Spots: T to C**

**No. 40**

**Mutation Spots Location: 741**

**Mutation Sequence: TTTACATAGAAGTTATTTGACTCCT**

**Mutation Spots: T to C**

**No. 41**

**Mutation Spots Location: 754**

**Mutation Sequence: TATTTGACTCCTGGTGATTCTTCTT**

**Mutation Spots: G to A**

**No. 42**

**Mutation Spots Location: 760**

**Mutation Sequence: ACTCCTGGTGATTCTTCTTCAGGTT**

**Mutation Spots: T to C**

**No. 43**

**Mutation Spots Location: 769**

**Mutation Sequence: GATTCTTCTTCAGGTTGGACAGCTG**

**Mutation Spots: G to A**

**No. 44**

**Mutation Spots Location: 783**

**Mutation Sequence: TTGGACAGCTGGTGCTGCAGCTTAT**

**Mutation Spots: T to A**

**No. 45**

**Mutation Spots Location: 806**

**Mutation Sequence: ATTATGTGGGTTATCTTCAACCTAG**

**Mutation Spots: A to G**

**No. 46**

**Mutation Spots Location: 807**

**Mutation Sequence: TTATGTGGGTTATCTTCAACCTAGG**

**Mutation Spots: T to C**

**No. 47**

**Mutation Spots Location: 864**

**Mutation Sequence: CATTACAGATGCTGTAGACTGTGCA**

**Mutation Spots: T to C**

**No. 48**

**Mutation Spots Location: 867**

**Mutation Sequence: TACAGATGCTGTAGACTGTGCACTT**

**Mutation Spots: A to T**

**No. 49**

**Mutation Spots Location: 872**

**Mutation Sequence: ATGCTGTAGACTGTGCACTTGACCC**

**Mutation Spots: G to T**

**No. 50**

**Mutation Spots Location: 878**

**Mutation Sequence: TAGACTGTGCACTTGACCCTCTCTC**

**Mutation Spots: T to G**

**No. 51**

**Mutation Spots Location: 911**

**Mutation Sequence: AGTGTACGTTGAAATCCTTCACTGT**

**Mutation Spots: A to G**

**No. 52**

**Mutation Spots Location: 917**

**Mutation Sequence: CGTTGAAATCCTTCACTGTAGAAAA**

**Mutation Spots: T to A**

**No. 53**

**Mutation Spots Location: 926**

**Mutation Sequence: CCTTCACTGTAGAAAAAGGAATCTA**

**Mutation Spots: A to T**

**No. 54**

**Mutation Spots Location: 946**

**Mutation Sequence: ATCTATCAAACTTCTAACTTTAGAG**

**Mutation Spots: T to C**

**No. 55**

**Mutation Spots Location: 949**

**Mutation Sequence: TATCAAACTTCTAACTTTAGAGTCC**

**Mutation Spots: A to T**

**No. 56**

**Mutation Spots Location: 977**

**Mutation Sequence: CAACAGAATCTATTGTTAGATTTCC**

**Mutation Spots: T to C**

**No. 57**

**Mutation Spots Location: 1002**

**Mutation Sequence: TAATATTACAAACTTGTGCCCTTTT**

**Mutation Spots: C to T**

**No. 58**

**Mutation Spots Location: 1045**

**Mutation Sequence: ACCAGATTTGCATCTGTTTATGCTT**

**Mutation Spots: T to C**

**No. 59**

**Mutation Spots Location: 1094**

**Mutation Sequence: GTGTTGCTGATTATTCTGTCCTATA**

**Mutation Spots: A to G**

**No. 60**

**Mutation Spots Location: 1097**

**Mutation Sequence: TTGCTGATTATTCTGTCCTATATAA**

**Mutation Spots: C to T**

**No. 61**

**Mutation Spots Location: 1108**

**Mutation Sequence: TCTGTCCTATATAATTCCGCATCAT**

**Mutation Spots: A to T**

**No. 62**

**Mutation Spots Location: 1148**

**Mutation Sequence: GTTATGGAGTGTCTCCTACTAAATT**

**Mutation Spots: C to T**

**No. 63**

**Mutation Spots Location: 1237**

**Mutation Sequence: CAAATCGCTCCAGGGCAAACTGGAA**

**Mutation Spots: G to A**

**No. 64**

**Mutation Spots Location: 1238**

**Mutation Sequence: AAATCGCTCCAGGGCAAACTGGAAA**

**Mutation Spots: G to A**

**No. 65**

**Mutation Spots Location: 1274**

**Mutation Sequence: ATAATTATAAATTACCAGATGATTT**

**Mutation Spots: T to C**

**No. 66**

**Mutation Spots Location: 1285**

**Mutation Sequence: TTACCAGATGATTTTACAGGCTGCG**

**Mutation Spots: T to C**

**No. 67**

**Mutation Spots Location: 1297**

**Mutation Sequence: TTTACAGGCTGCGTTATAGCTTGGA**

**Mutation Spots: G to C**

**No. 68**

**Mutation Spots Location: 1306**

**Mutation Sequence: TGCGTTATAGCTTGGAATTCTAACA**

**Mutation Spots: T to G**

**No. 69**

**Mutation Spots Location: 1313**

**Mutation Sequence: TAGCTTGGAATTCTAACAATCTTGA**

**Mutation Spots: C to A**

**No. 70**

**Mutation Spots Location: 1318**

**Mutation Sequence: TGGAATTCTAACAATCTTGATTCTA**

**Mutation Spots: A to T**

**No. 71**

**Mutation Spots Location: 1338**

**Mutation Sequence: TTCTAAGGTTGGTGGTAATTATAAT**

**Mutation Spots: T to A**

**No. 72**

**Mutation Spots Location: 1342**

**Mutation Sequence: AAGGTTGGTGGTAATTATAATTACC**

**Mutation Spots: A to G**

**No. 73**

**Mutation Spots Location: 1364**

**Mutation Sequence: ACCTGTATAGATTGTTTAGGAAGTC**

**Mutation Spots: T to G**

**No. 74**

**Mutation Spots Location: 1368**

**Mutation Sequence: GTATAGATTGTTTAGGAAGTCTAAT**

**Mutation Spots: T to C**

**No. 75**

**Mutation Spots Location: 1373**

**Mutation Sequence: GATTGTTTAGGAAGTCTAATCTCAA**

**Mutation Spots: A to G**

**No. 76**

**Mutation Spots Location: 1388**

**Mutation Sequence: CTAATCTCAAACCTTTTGAGAGAGA**

**Mutation Spots: C to T**

**No. 77**

**Mutation Spots Location: 1403**

**Mutation Sequence: TTGAGAGAGATATTTCAACTGAAAT**

**Mutation Spots: T to C**

**No. 78**

**Mutation Spots Location: 1407**

**Mutation Sequence: GAGAGATATTTCAACTGAAATCTAT**

**Mutation Spots: A to T**

**No. 79**

**Mutation Spots Location: 1417**

**Mutation Sequence: TCAACTGAAATCTATCAGGCCGGTA**

**Mutation Spots: T to A**

**No. 80**

**Mutation Spots Location: 1428**

**Mutation Sequence: CTATCAGGCCGGTAGCACACCTTGT**

**Mutation Spots: T to G**

**No. 81**

**Mutation Spots Location: 1433**

**Mutation Sequence: AGGCCGGTAGCACACCTTGTAATGG**

**Mutation Spots: C to T**

**No. 82**

**Mutation Spots Location: 1440**

**Mutation Sequence: TAGCACACCTTGTAATGGTGTTGAA**

**Mutation Spots: T to C**

**No. 83**

**Mutation Spots Location: 1449**

**Mutation Sequence: TTGTAATGGTGTTGAAGGTTTTAAT**

**Mutation Spots: T to C**

**No. 84**

**Mutation Spots Location: 1455**

**Mutation Sequence: TGGTGTTGAAGGTTTTAATTGTTAC**

**Mutation Spots: T to C**

**No. 85**

**Mutation Spots Location: 1530**

**Mutation Sequence: ACCATACAGAGTAGTAGTACTTTCT**

**Mutation Spots: A to G**

**No. 86**

**Mutation Spots Location: 1572**

**Mutation Sequence: ACCAGCAACTGTTTGTGGACCTAAA**

**Mutation Spots: T to C**

**No. 87**

**Mutation Spots Location: 1585**

**Mutation Sequence: TGTGGACCTAAAAAGTCTACTAATT**

**Mutation Spots: A to G**

**No. 88**

**Mutation Spots Location: 1605**

**Mutation Sequence: TAATTTGGTTAAAAACAAATGTGTC**

**Mutation Spots: A to G**

**No. 89**

**Mutation Spots Location: 1674**

**Mutation Sequence: GTCTAACAAAAAGTTTCTGCCTTTC**

**Mutation Spots: G to A**

**No. 90**

**Mutation Spots Location: 1682**

**Mutation Sequence: AAAAGTTTCTGCCTTTCCAACAATT**

**Mutation Spots: C to A**

**No. 91**

**Mutation Spots Location: 1686**

**Mutation Sequence: GTTTCTGCCTTTCCAACAATTTGGC**

**Mutation Spots: C to T**

**No. 92**

**Mutation Spots Location: 1693**

**Mutation Sequence: CCTTTCCAACAATTTGGCAGAGACA**

**Mutation Spots: T to C**

**No. 93**

**Mutation Spots Location: 1725**

**Mutation Sequence: CACTACTGATGCTGTCCGTGATCCA**

**Mutation Spots: T to C**

**No. 94**

**Mutation Spots Location: 1730**

**Mutation Sequence: CTGATGCTGTCCGTGATCCACAGAC**

**Mutation Spots: G to A**

**No. 95**

**Mutation Spots Location: 1761**

**Mutation Sequence: GATTCTTGACATTACACCATGTTCT**

**Mutation Spots: T to C**

**No. 96**

**Mutation Spots Location: 1773**

**Mutation Sequence: TACACCATGTTCTTTTGGTGGTGTC**

**Mutation Spots: T to C**

**No. 97**

**Mutation Spots Location: 1800**

**Mutation Sequence: TGTTATAACACCAGGAACAAATACT**

**Mutation Spots: A to T**

**No. 98**

**Mutation Spots Location: 1815**

**Mutation Sequence: AACAAATACTTCTAACCAGGTTGCT**

**Mutation Spots: T to C**

**No. 99**

**Mutation Spots Location: 1816**

**Mutation Sequence: ACAAATACTTCTAACCAGGTTGCTG**

**Mutation Spots: A to G**

**No. 100**

**Mutation Spots Location: 1819**

**Mutation Sequence: AATACTTCTAACCAGGTTGCTGTTC**

**Mutation Spots: C to T**

**No. 101**

**Mutation Spots Location: 1832**

**Mutation Sequence: AGGTTGCTGTTCTTTATCAGGATGT**

**Mutation Spots: T to A**

**No. 102**

**Mutation Spots Location: 1834**

**Mutation Sequence: GTTGCTGTTCTTTATCAGGATGTTA**

**Mutation Spots: T to C**

**No. 103**

**Mutation Spots Location: 1868**

**Mutation Sequence: AAGTCCCTGTTGCTATTCATGCAGA**

**Mutation Spots: C to T**

**No. 104**

**Mutation Spots Location: 1869**

**Mutation Sequence: AGTCCCTGTTGCTATTCATGCAGAT**

**Mutation Spots: T to C**

**No. 105**

**Mutation Spots Location: 1878**

**Mutation Sequence: TGCTATTCATGCAGATCAACTTACT**

**Mutation Spots: A to C**

**No. 106**

**Mutation Spots Location: 1885**

**Mutation Sequence: CATGCAGATCAACTTACTCCTACTT**

**Mutation Spots: C to T**

**No. 107**

**Mutation Spots Location: 1902**

**Mutation Sequence: TCCTACTTGGCGTGTTTATTCTACA**

**Mutation Spots: T to C**

**No. 108**

**Mutation Spots Location: 1969**

**Mutation Sequence: GCTGAACATGTCAACAACTCATATG**

**Mutation Spots: A to C**

**No. 109**

**Mutation Spots Location: 1995**

**Mutation Sequence: GTGTGACATACCCATTGGTGCAGGT**

**Mutation Spots: C to T**

**No. 110**

**Mutation Spots Location: 1996**

**Mutation Sequence: TGTGACATACCCATTGGTGCAGGTA**

**Mutation Spots: A to G**

**No. 111**

**Mutation Spots Location: 2018**

**Mutation Sequence: GTATATGCGCTAGTTATCAGACTCA**

**Mutation Spots: G to A**

**No. 112**

**Mutation Spots Location: 2020**

**Mutation Sequence: ATATGCGCTAGTTATCAGACTCAGA**

**Mutation Spots: T to G**

**No. 113**

**Mutation Spots Location: 2030**

**Mutation Sequence: GTTATCAGACTCAGACTAATTCTCC**

**Mutation Spots: A to T**

**No. 114**

**Mutation Spots Location: 2043**

**Mutation Sequence: GACTAATTCTCCTCGGCGGGCACGT**

**Mutation Spots: T to G**

**No. 115**

**Mutation Spots Location: 2050**

**Mutation Sequence: TCTCCTCGGCGGGCACGTAGTGTAG**

**Mutation Spots: G to A**

**No. 116**

**Mutation Spots Location: 2052**

**Mutation Sequence: TCCTCGGCGGGCACGTAGTGTAGCT**

**Mutation Spots: A to T**

**No. 117**

**Mutation Spots Location: 2064**

**Mutation Sequence: ACGTAGTGTAGCTAGTCAATCCATC**

**Mutation Spots: T to C**

**No. 118**

**Mutation Spots Location: 2075**

**Mutation Sequence: CTAGTCAATCCATCATTGCCTACAC**

**Mutation Spots: T to C**

**No. 119**

**Mutation Spots Location: 2085**

**Mutation Sequence: CATCATTGCCTACACTATGTCACTT**

**Mutation Spots: C to T**

**No. 120**

**Mutation Spots Location: 2103**

**Mutation Sequence: GTCACTTGGTGCAGAAAATTCAGTT**

**Mutation Spots: A to G**

**No. 121**

**Mutation Spots Location: 2117**

**Mutation Sequence: AAAATTCAGTTGCTTACTCTAATAA**

**Mutation Spots: C to T**

**No. 122**

**Mutation Spots Location: 2127**

**Mutation Sequence: TGCTTACTCTAATAACTCTATTGCC**

**Mutation Spots: T to C**

**No. 123**

**Mutation Spots Location: 2133**

**Mutation Sequence: CTCTAATAACTCTATTGCCATACCC**

**Mutation Spots: T to C**

**No. 124**

**Mutation Spots Location: 2138**

**Mutation Sequence: ATAACTCTATTGCCATACCCACAAA**

**Mutation Spots: C to A**

**No. 125**

**Mutation Spots Location: 2152**

**Mutation Sequence: ATACCCACAAATTTTACTATTAGTG**

**Mutation Spots: T to C**

**No. 126**

**Mutation Spots Location: 2197**

**Mutation Sequence: GTGTCTATGACCAAGACATCAGTAG**

**Mutation Spots: A to T**

**No. 127**

**Mutation Spots Location: 2210**

**Mutation Sequence: AGACATCAGTAGATTGTACAATGTA**

**Mutation Spots: A to G**

**No. 128**

**Mutation Spots Location: 2226**

**Mutation Sequence: TACAATGTACATTTGTGGTGATTCA**

**Mutation Spots: T to A**

**No. 129**

**Mutation Spots Location: 2252**

**Mutation Sequence: CTGAATGCAGCAATCTTTTGTTGCA**

**Mutation Spots: A to G**

**No. 130**

**Mutation Spots Location: 2336**

**Mutation Sequence: ACAAAAACACCCAAGAAGTTTTTGC**

**Mutation Spots: A to G**

**No. 131**

**Mutation Spots Location: 2418**

**Mutation Sequence: TTCACAAATATTACCAGATCCATCA**

**Mutation Spots: A to G**

**No. 132**

**Mutation Spots Location: 2430**

**Mutation Sequence: ACCAGATCCATCAAAACCAAGCAAG**

**Mutation Spots: A to T**

**No. 133**

**Mutation Spots Location: 2436**

**Mutation Sequence: TCCATCAAAACCAAGCAAGAGGTCA**

**Mutation Spots: A to C**

**No. 134**

**Mutation Spots Location: 2452**

**Mutation Sequence: AAGAGGTCATTTATTGAAGATCTAC**

**Mutation Spots: A to G**

**No. 135**

**Mutation Spots Location: 2453**

**Mutation Sequence: AGAGGTCATTTATTGAAGATCTACT**

**Mutation Spots: T to C**

**No. 136**

**Mutation Spots Location: 2475**

**Mutation Sequence: ACTTTTCAACAAAGTGACACTTGCA**

**Mutation Spots: A to G**

**No. 137**

**Mutation Spots Location: 2501**

**Mutation Sequence: ATGCTGGCTTCATCAAACAATATGG**

**Mutation Spots: T to C**

**No. 138**

**Mutation Spots Location: 2526**

**Mutation Sequence: TGATTGCCTTGGTGATATTGCTGCT**

**Mutation Spots: T to A**

**No. 139**

**Mutation Spots Location: 2535**

**Mutation Sequence: TGGTGATATTGCTGCTAGAGACCTC**

**Mutation Spots: T to A**

**No. 140**

**Mutation Spots Location: 2549**

**Mutation Sequence: CTAGAGACCTCATTTGTGCACAAAA**

**Mutation Spots: T to C**

**No. 141**

**Mutation Spots Location: 2556**

**Mutation Sequence: CCTCATTTGTGCACAAAAGTTTAAC**

**Mutation Spots: A to C**

**No. 142**

**Mutation Spots Location: 2579**

**Mutation Sequence: ACGGCCTTACTGTTTTGCCACCTTT**

**Mutation Spots: T to C**

**No. 143**

**Mutation Spots Location: 2596**

**Mutation Sequence: CCACCTTTGCTCACAGATGAAATGA**

**Mutation Spots: A to G**

**No. 144**

**Mutation Spots Location: 2619**

**Mutation Sequence: GATTGCTCAATACACTTCTGCACTG**

**Mutation Spots: C to T**

**No. 145**

**Mutation Spots Location: 2669**

**Mutation Sequence: GGACCTTTGGTGCAGGTGCTGCATT**

**Mutation Spots: C to A**

**No. 146**

**Mutation Spots Location: 2670**

**Mutation Sequence: GACCTTTGGTGCAGGTGCTGCATTA**

**Mutation Spots: A to G**

**No. 147**

**Mutation Spots Location: 2675**

**Mutation Sequence: TTGGTGCAGGTGCTGCATTACAAAT**

**Mutation Spots: C to G**

**No. 148**

**Mutation Spots Location: 2711**

**Mutation Sequence: TGCAAATGGCTTATAGGTTTAATGG**

**Mutation Spots: A to G**

**No. 149**

**Mutation Spots Location: 2757**

**Mutation Sequence: TCTCTATGAGAACCAAAAATTGATT**

**Mutation Spots: C to T**

**No. 150**

**Mutation Spots Location: 2788**

**Mutation Sequence: CAATTTAATAGTGCTATTGGCAAAA**

**Mutation Spots: G to T**

**No. 151**

**Mutation Spots Location: 2835**

**Mutation Sequence: AGCAAGTGCACTTGGAAAACTTCAA**

**Mutation Spots: T to G**

**No. 152**

**Mutation Spots Location: 2858**

**Mutation Sequence: AAGATGTGGTCAACCAAAATGCACA**

**Mutation Spots: A to G**

**No. 153**

**Mutation Spots Location: 2940**

**Mutation Sequence: TTTAAATGATATCCTTTCACGTCTT**

**Mutation Spots: C to T**

**No. 154**

**Mutation Spots Location: 2941**

**Mutation Sequence: TTAAATGATATCCTTTCACGTCTTG**

**Mutation Spots: C to T**

**No. 155**

**Mutation Spots Location: 2947**

**Mutation Sequence: GATATCCTTTCACGTCTTGACAAAG**

**Mutation Spots: C to T**

**No. 156**

**Mutation Spots Location: 2959**

**Mutation Sequence: CGTCTTGACAAAGTTGAGGCTGAAG**

**Mutation Spots: G to A**

**No. 157**

**Mutation Spots Location: 2966**

**Mutation Sequence: ACAAAGTTGAGGCTGAAGTGCAAAT**

**Mutation Spots: C to T**

**No. 158**

**Mutation Spots Location: 2967**

**Mutation Sequence: CAAAGTTGAGGCTGAAGTGCAAATT**

**Mutation Spots: T to G**

**No. 159**

**Mutation Spots Location: 2968**

**Mutation Sequence: AAAGTTGAGGCTGAAGTGCAAATTG**

**Mutation Spots: G to A**

**No. 160**

**Mutation Spots Location: 2986**

**Mutation Sequence: CAAATTGATAGGTTGATCACAGGCA**

**Mutation Spots: T to G**

**No. 161**

**Mutation Spots Location: 2991**

**Mutation Sequence: TGATAGGTTGATCACAGGCAGACTT**

**Mutation Spots: C to T**

**No. 162**

**Mutation Spots Location: 2992**

**Mutation Sequence: GATAGGTTGATCACAGGCAGACTTC**

**Mutation Spots: A to G**

**No. 163**

**Mutation Spots Location: 3020**

**Mutation Sequence: GTTTGCAGACATATGTGACTCAACA**

**Mutation Spots: A to T**

**No. 164**

**Mutation Spots Location: 3025**

**Mutation Sequence: CAGACATATGTGACTCAACAATTAA**

**Mutation Spots: A to G**

**No. 165**

**Mutation Spots Location: 3055**

**Mutation Sequence: GCTGCAGAAATCAGAGCTTCTGCTA**

**Mutation Spots: A to C**

**No. 166**

**Mutation Spots Location: 3094**

**Mutation Sequence: AAAATGTCAGAGTGTGTACTTGGAC**

**Mutation Spots: T to C**

**No. 167**

**Mutation Spots Location: 3146**

**Mutation Sequence: AGGGCTATCATCTTATGTCCTTCCC**

**Mutation Spots: T to C**

**No. 168**

**Mutation Spots Location: 3156**

**Mutation Sequence: TCTTATGTCCTTCCCTCAGTCAGCA**

**Mutation Spots: C to T**

**No. 169**

**Mutation Spots Location: 3158**

**Mutation Sequence: TTATGTCCTTCCCTCAGTCAGCACC**

**Mutation Spots: C to A**

**No. 170**

**Mutation Spots Location: 3170**

**Mutation Sequence: CTCAGTCAGCACCTCATGGTGTAGT**

**Mutation Spots: C to T**

**No. 171**

**Mutation Spots Location: 3187**

**Mutation Sequence: GGTGTAGTCTTCTTGCATGTGACTT**

**Mutation Spots: T to C**

**No. 172**

**Mutation Spots Location: 3232**

**Mutation Sequence: AACTTCACAACTGCTCCTGCCATTT**

**Mutation Spots: G to A**

**No. 173**

**Mutation Spots Location: 3246**

**Mutation Sequence: TCCTGCCATTTGTCATGATGGAAAA**

**Mutation Spots: T to C**

**No. 174**

**Mutation Spots Location: 3318**

**Mutation Sequence: GTTTGTAACACAAAGGAATTTTTAT**

**Mutation Spots: A to G**

**No. 175**

**Mutation Spots Location: 3326**

**Mutation Sequence: CACAAAGGAATTTTTATGAACCACA**

**Mutation Spots: T to C**

**No. 176**

**Mutation Spots Location: 3328**

**Mutation Sequence: CAAAGGAATTTTTATGAACCACAAA**

**Mutation Spots: T to C**

**No. 177**

**Mutation Spots Location: 3344**

**Mutation Sequence: AACCACAAATCATTACTACAGACAA**

**Mutation Spots: T to C**

**No. 178**

**Mutation Spots Location: 3369**

**Mutation Sequence: CACATTTGTGTCTGGTAACTGTGAT**

**Mutation Spots: T to A**

**No. 179**

**Mutation Spots Location: 3372**

**Mutation Sequence: ATTTGTGTCTGGTAACTGTGATGTT**

**Mutation Spots: T to C**

**No. 180**

**Mutation Spots Location: 3373**

**Mutation Sequence: TTTGTGTCTGGTAACTGTGATGTTG**

**Mutation Spots: A to G**

**No. 181**

**Mutation Spots Location: 3374**

**Mutation Sequence: TTGTGTCTGGTAACTGTGATGTTGT**

**Mutation Spots: A to G**

**No. 182**

**Mutation Spots Location: 3377**

**Mutation Sequence: TGTCTGGTAACTGTGATGTTGTAAT**

**Mutation Spots: G to A**

**No. 183**

**Mutation Spots Location: 3393**

**Mutation Sequence: TGTTGTAATAGGAATTGTCAACAAC**

**Mutation Spots: A to G**

**No. 184**

**Mutation Spots Location: 3399**

**Mutation Sequence: AATAGGAATTGTCAACAACACAGTT**

**Mutation Spots: C to T**

**No. 185**

**Mutation Spots Location: 3441**

**Mutation Sequence: TGAATTAGACTCATTCAAGGAGGAG**

**Mutation Spots: A to G**

**No. 186**

**Mutation Spots Location: 3469**

**Mutation Sequence: GATAAATATTTTAAGAATCATACAT**

**Mutation Spots: A to G**

**No. 187**

**Mutation Spots Location: 3543**

**Mutation Sequence: AAACATTCAAAAAGAAATTGACCGC**

**Mutation Spots: A to G**

**No. 188**

**Mutation Spots Location: 3571**

**Mutation Sequence: AATGAGGTTGCCAAGAATTTAAATG**

**Mutation Spots: A to G**

**No. 189**

**Mutation Spots Location: 3572**

**Mutation Sequence: ATGAGGTTGCCAAGAATTTAAATGA**

**Mutation Spots: A to G**

**No. 190**

**Mutation Spots Location: 3608**

**Mutation Sequence: ATCTCCAAGAACTTGGAAAGTATGA**

**Mutation Spots: T to C**

**No. 191**

**Mutation Spots Location: 3627**

**Mutation Sequence: GTATGAGCAGTATATAAAATGGCCA**

**Mutation Spots: T to C**

**No. 192**

**Mutation Spots Location: 3630**

**Mutation Sequence: TGAGCAGTATATAAAATGGCCATGG**

**Mutation Spots: A to G**

**No. 193**

**Mutation Spots Location: 3637**

**Mutation Sequence: TATATAAAATGGCCATGGTACATTT**

**Mutation Spots: C to T**

**No. 194**

**Mutation Spots Location: 3644**

**Mutation Sequence: AATGGCCATGGTACATTTGGCTAGG**

**Mutation Spots: A to G**

**No. 195**

**Mutation Spots Location: 3661**

**Mutation Sequence: TGGCTAGGTTTTATAGCTGGCTTGA**

**Mutation Spots: A to G**

**No. 196**

**Mutation Spots Location: 3683**

**Mutation Sequence: TGATTGCCATAGTAATGGTGACAAT**

**Mutation Spots: T to C**

**No. 197**

**Mutation Spots Location: 3696**

**Mutation Sequence: AATGGTGACAATTATGCTTTGCTGT**

**Mutation Spots: T to C**

**No. 198**

**Mutation Spots Location: 3699**

**Mutation Sequence: GGTGACAATTATGCTTTGCTGTATG**

**Mutation Spots: G to A**

**No. 199**

**Mutation Spots Location: 3715**

**Mutation Sequence: TGCTGTATGACCAGTTGCTGTAGTT**

**Mutation Spots: A to T**

**No. 200**

**Mutation Spots Location: 3731**

**Mutation Sequence: GCTGTAGTTGTCTCAAGGGCTGTTG**

**Mutation Spots: T to C**

**No. 201**

**Mutation Spots Location: 3788**

**Mutation Sequence: ACGACTCTGAGCCAGTGCTCAAAGG**

**Mutation Spots: C to T**

**No. 202**

**Mutation Spots Location: 3789**

**Mutation Sequence: CGACTCTGAGCCAGTGCTCAAAGGA**

**Mutation Spots: A to G**

**No. 203**

**Mutation Spots Location: 3793**

**Mutation Sequence: TCTGAGCCAGTGCTCAAAGGAGTCA**

**Mutation Spots: C to T**

**No. 204**

**Mutation Spots Location: 3801**

**Mutation Sequence: AGTGCTCAAAGGAGTCAAATTACAT**

**Mutation Spots: A to G**

**No. 205**

**Mutation Spots Location: 3807**

**Mutation Sequence: CAAAGGAGTCAAATTACATTACACA**

**Mutation Spots: A to G**