

SEQUENCE LISTING

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<120> Human diabetes susceptibility shank2 gene

<130> B0555

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<170> PatentIn version 3.3

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Asn Glu Gly Phe Gly Phe Val Leu Arg Gly Ala Lys Ala Asp Thr Pro	
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100 105 110	

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Leu Lys Val Val Thr Val Thr Arg Asn Leu Asp Pro Asp Asp Thr Ala	
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Glu Ser Val Asp Glu Gly Gly Val Ala Trp Gln Ala Gly Leu Arg Thr	65	70	75	80
Gly Asp Phe Leu Ile Glu Val Asn Asn Glu Asn Val Val Lys Val Gly	85	90	95	
His Arg Gln Val Val Asn Met Ile Arg Gln Gly Gly Asn His Leu Val	100	105	110	

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 ctcttttctc tgcattgagga ggccacagca cagagtgggg actcacatac ccacagacac 360
 acggcgagtg gtagagccag gctgttcttc caagatccac gtatcacttc ccaccctcct 420
 gctccaacca cctcctgtg ccacctgtca gggaggcggg gtcttgccca actggatatc 480
 ttctgtgatg cagattctag aggaaagagg aaaacaagaa acagagggag cttaggcaga 540
 aagccggaag gaacaaaagt tatgcacagg caag 574

<210> 9
 <211> 841
 <212> DNA
 <213> Homo sapiens

<220>
 <221> miscfeature
 <222> (527)..(527)
 <223> SNP234=A/G

<400> 9
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 gaaaaacca gggatgctgc caccaggaga cagtgtccgc ataacaaggc ttatctttgt 120
 ggaattttac ttctttatat gtgtctgtta gtaatacatt ttgtcatgtg ttatataact 180
 ttttttttca cttgggtatg tcttttttat tgtggtaaaa tacacagacc ataaaattta 240
 ccatcaaacc cattagcact cactctccat ctccctccca gcccaggca aatactcatc 300
 ccctctgggt cttgggtctg cctgttccgg gcattttcca cccacagaat catgctctag 360

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gcaacctttt gtctggcttc tttcagcatc gtgtgcttta ggttcatccg tatggtagca 420
tgtgtccgta ctaccttctg tttgtgggtg aataacgttc caccatgtgg ttagaccaca 480
attagtttat ccattcacta gttcaggagac acttgggctg tttctarctt atggttgtga 540
ataatgtcga cataaacgtt tttgtaccag ttttcgtttt cagttcctta gggtagatac 600
ctaggagtgg aattgctggg tcaggtggtc attctgtgtt tcttgaaact gctgatgcac 660
accccagagt ccccatccgg ggtgggatgg gcgggtgttc agtgagtgct gagttcacca 720
ccttcgtcac atgcctgggc agaaggaccg cagaggggaag ggggtcctgt ccccttttgt 780
taagacagag ctcagatcca acaaaagctt aactgctgag cagcatgata cagactgcaa 840
a 841

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<210> 10
<211> 201
<212> DNA
<213> Homo sapiens

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<220>
<221> misfeature
<222> (101)..(101)
<223> SNP235=C/T

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<400> 10
actcaagcaa tgaagtcaat tgcaccttgg ggccgccatc atatttcttg gcctctctgc 60
tgaaccacac ggataatgtg ctctgtggta catgtctaca ygcctgtcat tttctttaa 120
agcatcagtg actaaacatt ttcggttcta aaaatggaaa agttcctccc ctgccacaca 180
gagctacaga aacaccacac t 201

```

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<210> 11
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP239=C/T

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```

<400> 11
tctcaatggg gagcccaggg agaaacaccc acagctggaa gcaggcacca cagggggcaa 60
agctgctggg gtgtgagtac actgccccat ggcctctggg gtccctggaca agccctctgt 120
ccaccacaga gcagggacta ggcaactggc tccctactac acctgtgttg cacgcaggga 180
gtgaacagca agagctgtac tttttgtttt tgcagaaatc cagatcacgg ttcacccacg 240

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actatcagaa acccaacccc agatgttcat gactgtccat caatctagga ggtctgggcc 300
yggcccgtag tcctgaaaat ctggacactc tcagtgcct gctaataaga agggacagcc 360
at ttggctag atgccagcat atggcccagt ggctctggct gtttgcacag caggctcggc 420
tgcccctcaa tgacttcatg atgagggata attaaaacag cttccctgca cgttctcctc 480
cctcatccaa tttggtcaca tgatgaacaa gctcagagga aattagcaag gtattctaag 540
ccctacagga cagacattct agcaggtgag gagtaagcca ggtttctgga agcttcccat 600
a 601

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<210> 12
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP240=A/G

<400> 12
ggcatgacct gcacacccaa cacctagcag caaggcagat tccaacctga ccatggctct 60
ccagtctcat gcccatggct gagtatccca tggacatggc agcagccttc cagtgtgagc 120
cctgcttctt tccttgctaa agacagttat ccacacaaca gccaaaggat tcttcttaac 180
aacagcaatc atggaaactt ctttgtaaaa actccttaaa ggttctcccc atttagaaca 240
gaaccagac ccctgattta gaacatgagg ctcaaggagc ttggctccta tctccagcct 300
ractttacta cctcttctcc tggactatgc acctcccact cacacctcca tctggttatc 360
cctggcatct gggagaaccc aagcaagttc tttcctactg cagggtcttg gccaaagctg 420
ttttcaggaa tgtgctgtcc acacacctgt acatgctcgt ccctcccaaa ggcattcctg 480
agcactttgt ttttactact gggcagtcca ccttgccctg agtctcatgc tgtcctttcc 540
acactggagc actggtgttg ggcctagagt cataaaatgt ttacatacag cactgctctg 600
g 601

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<210> 13
<211> 401
<212> DNA
<213> Homo sapiens

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<220>
<221> misfeature
<222> (201)..(201)
<223> SNP174=C/T

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<400> 13
cctgggcaca cagttacatg aggtgtatTTT aacaagatgc ctgccgcagg ccctgaggtc      60
ctaaaatcgc agcctgcagc ctgttcattt tgggaatgtg agaagtcgag gcggtgcccc      120
agggaggccg ggcagcagac cctcagtgtg cagtggatgg aaatgaatca gcctcatcag      180
ctgtgggggtt tgTTaataca yaaaaaacag acacatggct tctggaaggg cccagttgga      240
aacgggagct tcttgaagat ttggctcatt taaattgtaa tcccaggaaa gctgttatgc      300
cctagagtcc caccttcctt gatgtgccca gacatggcca acagcacagc agagcctggc      360
cacagccttc ccacaccac ctgcgccag gccttcccct g                               401

```

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<210> 14
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP175=C/G

```

```

<400> 14
ccaccggtt tcagcagtga gtatccagtg tcctgggtcc actggacagc tggtcaccct      60
gcactgccct gaagatagag tcttgggagc aggactatcc taatggggcc ttgggagaga      120
ggccaccta cagcggcagc ggtctttgca aggtgactcc tgggggctgt tcctttcact      180
gaggttctca gaatgtaatt aggaaagcag atggatttag gaagtaaagg agccggatcg      240
aggaagacag caccgggagt tctcggaggg cagacctcag cttgcaggac cctcgtctgt      300
stggtacaga caggcaaccg aacaccagcc acgcgttatc gggttctctc ccctcccatg      360
agcacacccg ggtagtggct gttgctcatt cattcattca ttactcatt ccagtgtttc      420
tgttccccgt accactaaaa gccatgaggc acaggcagtt cagctgtctc tgctccatc      480
tgtgggaagt ttgcgtcctc atcaggaggt tttggccgac acacaaagaa gtgaacacat      540
aacttcaggt ggctgagtac cacctaagaa ggcagaacca agtaaaagga gactgaacag      600
a                               601

```

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<210> 15
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP176=C/T

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```

<400> 15
tgtgtcagag ctcagatctc aaaacacatt gaccttctgc ccagaatctt tcccctgcag      60
agggagaggg atgtctgtga ggggcctgca acagcctttc tgagcatgag gaggaggcag      120
aatgggggaa tgtcatgtgg gcgctggggc agaggcaggt ggccatcccg tctgtcacca      180
ctccgcatta ccctgaaccc tagatgcagg ccagtggaac agacacggac atgaggtctg      240
gaggggcctg tgggggaccc caactcaaac ttgggcttgc aaaagccagg aaagtggccc      300
ygaatcttgc acttaatata gaaaccacat cgtttccatc aatgaagagc cagttccagc      360
accaagcatg tgggccaggt gacgcgcgtt tgtaattaga ccctaaatac catcaagaca      420
ctaaaaatgc cgacttcccc aaagcagctg gggctgggag gaacccgcaa gagcggggct      480
tgtgattttt tggagtgttt agaggctctg caaatgaact cagaccggtg gtaactcctg      540
caacgcacat ttgctttgca cccctccagg gtatggttta gattctgccg agagggcaca      600
g                                                                                   601

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<210> 16
<211> 4000
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (2000)..(2000)
<223> SNF178=C/T

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<400> 16
gacagagtac aatccccacc cccaaaccaa caaataaatt ctctgaaggt tctgaagagt      60
gaacaaagac aggcagatth tagatgagag ttgaaaatta gaagctttgt gcaatggatg      120
cattatggta tgagtcacct gcagtttttt gttttttttt tttaaatcca gatcctgcac      180
aaacctgcag ttctgataga aatcagagga tacagcccac agtggccata gcagccaaag      240
tgaggggaga actccagaaa agagagagcc agagaagggt agtttcatat tctgtgtgta      300
aacttctcat aggtcttttg ttgatgtctg agctgagctg tgtgtgtaag gaagactcaa      360
ataggcttgc tatgataagg ctgaaatttg agctgctgcc actgcagggc agacaaaggt      420
tgcaatttga gtttaaccaa actcattatc agctaaaaca aaaacattaa caccatcaa      480
aggaatgtaa tataatccag agttgcaaaa gcataacatt cacgaaattt gggatacaac      540
tcaaacttat ttagcaaacc cagagatgac ccagatgttg gaattatcag agaaggactt      600
taaaaaacag ctactgtaac aatacccaac taggtaaagg aaaataggct tataatgaat      660
aaaagacagg aaatcccaag gaaattttta aaagaattat atggaattgt tagaaatgca      720

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tcagctgggc ttaacatcag catggatatg acagagctaa ttattagtga atttgaagac	780
atgccaaagag aacatatcca atccaaagaa gagagaaaaa aagattttta aaagtagaac	840
agagagtatt aaggatcaaa aggtctaaca taacgtgaac gagagtctca gaagggggga	900
aaattagagt caaagaagac agagaaaatg agtcataaaa aatacttgaa aaaatggtac	960
ccaaggaatt cccaattag gtgaaggaca taaatttata gattcaagaa gcctgtgaat	1020
ccccaaaaag ataagtattt aaaaaattat atagggacat tatagtcaat tctgctcaaa	1080
gccaaagaca aggtgagaat cttaaagcag ccagagaaat tatttacatt attcacactc	1140
taaataaaaa tgactgaatg attgcagact ttgcatcaga aaccatggag aagaacctct	1200
tgtagaagac ggcggaacaa catctttaac aggtgaaagt aaaaaaaca caactagaat	1260
tccatttctg gtgaaaattc tttaaagaat acaggcaaaa taaagacctt tataaaaaaa	1320
tgaaaaccag gttatttgtt gccagaaagc ctgcactaaa gaacgttctt caagctgaag	1380
tgaagcggga ctggatctat ggatggcaca aagggtgcc aaatggtga acacctggat	1440
acaaaataaa agatgattct ccctcttaat tttaaaagca gatatcactg ttttaggcaa	1500
aaataatact gattttgggg tttacaagtg tgtagatgta acacacatga caattataga	1560
ataaagtga gaggagtga agaagatgca tctatatggt tgctggggtt ttatatatta	1620
catggagtgt acaatttgaa ctctaagtag actatggaaa gctaagaatg tatactgtaa	1680
tccttgatcc actgctaaaa gaatgtgaag agctacagt taacgccaat ggaaaaatta	1740
aaataagggt ctaagaatag ttaaataatc taaaataagg cagaaaaagg gaaaaataaa	1800
aactgaggag ataaacagaa gacaaacttg taaacctaga tggaaccaca tgaacaattc	1860
tattaaatgt taaatagaat aaaactccaa ctaaaccatca ggccttataa aatggtttaa	1920
aaagaagacc taattatgct gtccgtacac tttcaatata aagacactga gaggctgaga	1980
gttaataaat gagaaaagay agttcctggg cagaatggct gttaatatca gacaaaataa	2040
atttttgaca cagggtcttg ctctgtcgcc caggctggag tgcagtgggtg tgatcgtgac	2100
tcactgcagc tttgacttcc caggctcagg tgattctccc acctcagcct cccaagtagc	2160
tgagaccaca gatgcatgtc actatgccta atgattttgt attctgtgta gaaatgtggt	2220
ttcaccatgt tgcccaggct ggtcttgaac tcctgggttc aagtgatctg cccaccttgg	2280
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gactgacctt ctaattttat tatcttcttc gaaggccata tctttttctt ttctgagaaa	2460
ttcttttcaa gtttatcttt caatctatct ttcaaatttt taatgccagc ccggagcggg	2520
ggctcatgtc tataatccca gcactctggg aagctggggg gggacgattg cttgaagcca	2580

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ggagtttgag acctgctggg cagcatagtg agacctcggt ccttgaaaaa aaaaaaaaaa 2640
aaaaaaaaaca tttaaaagtt agccaagtat ggcagcacgt ggctgtgggt ccagctattc 2700
aggaggctga ggtgggagga tcccttgagg ctgaggctgc agcaagtcct gatcacacca 2760
ctgcactcca gcctgggcaa cagagcgaga cctgtctcaa aaaaatTTTT tttatacctg 2820
ctatataata tttttaattt tcaggaactc ttatTTTgtt ctctgatcat ttcagaaaga 2880
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tcatattagt tcatcaaagt tctgatgttc cttggaaggc agctcatatt tcagagtagc 3060
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aaagaaagaa ctcttacatc tcaacagtaa gaaaacaact gaatataaaa atggggctgg 3780
gcatggtggc tcatgcttgt aatcccagca ctttgggggg ccgagtcggg tggatcacct 3840
gagtgaggtc aggagttcaa gaccagcctg gccaacatgg tgaaaccccg tctcttataa 3900
aagtacaaaa atcagccggg catggtggca cacatctgta atcccagcta cttgggaggc 3960
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<210> 17
<211> 828
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (328)..(328)
<223> SNP179=C/T

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<400> 17
agagcaccca cccagcccct ggggcgatca tatccctctg cgttccctgg aaatgggtca      60
gcatgctttc tatgaaaaga cagagactct tattaagaag aaacacaact gaagtgggag      120
gattgctcga gcctgggaga ttagctgcag ttagctggga tcacaccact gtactccagc      180
ctgagcaaca gagaacctgt ctcaaacaaa aaaaaacca aaaaccacaa tgccattctc      240
atgcctaaaa agcgactgca ttcctgggat catgaggcac cgcgtcatgg ctcaggctcc      300
ctgagtgtac agctggttta cttgactyat gagcaagatg cacacgtcac atctggctgg      360
cacgtctctg aagccttttt acatctctag gctttcccca ttcctctttt atccctttgc      420
agttcatttg ctgaagaaac cgagtcaatt gcatcctgcg gcattgcttc tattagtggg      480
ggtcagaggc gggattgcat ccaggagccc tttgcaggcg gtgccgggca taccacgccc      540
aggagccccg gcacagctgc ttgggtcttt ctgcgacgag acagcaccgg tgggtcaagc      600
accctcagcc tgtcccactc cccgtcagct tgccacttag tgtttttagc agccactggg      660
aaatgccatg cccagatcct tcacctcctg ggagctgcag aacgctgatg ttcaacttct      720
gttgctcctt ctccacttac tagttggaat aatttttatt ttaacttctt gagacagggg      780
cttgctctgt caccagggct ggagtgcagc ggcatgatct tagctcac                      828

```

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<210> 18
<211> 698
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (512)..(512)
<223> SNP180=A/G

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<400> 18
ggatctggca ggccgagagg ccgagacccc gtccccaggc gtccctgagg tctgagggtc      60
aggttggtcca tgtgtgggac gaacgtggct ctcgggctgc tgtggtggcc tagtatccgg      120
tggaagcagg aaggtttggc aggtcctcag cagggatgca gcctcctggg ctgacgcgag      180
gctccttgcc agtgccctga cgcgcaatgc aggtgccacc tgggtggccat gggaccctgg      240
aaaggggctc caggtcccac aagaaaacc agttcatggc cttttatggc acccatggga      300
gggggctgga tggggctctt tccccgttta ctgcgcagtg ttcaagttgc ccagagctcc      360
attagcctgc cccggtcagc cagcgtgggg gcagcagagc tccatgggga ggggggctcc      420
tgcacacctg tgaaggccca ggcagaagca ggcccggcag agcctgaggc tgagggcaga      480
aggggggtct tcctgggcga ttctttacta trccctgaca agcgggtcag ctcgccggct      540
ccccaggggc atggaaggaa ggaagcgtcc toggcatccg tgggggagat cacctacgcc      600

```

```

aagtggggga gggtgaaagg tgaagggggg tccgtggcag ccggcgagct gggagaagca 660
cagcacccag aggaaccag gtggcgactc ctgctcca 698

```

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<210> 19
<211> 876
<212> DNA
<213> Homo sapiens

```

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<220>
<221> miscfeature
<222> (376)..(376)
<223> SNP181=C/T

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<400> 19
ggagccagtg gcacaccagg ccaggaccag tgtctcatgt ggcaccagct caggacccat 60
gtcatgctag gaaaccatca tggcacccac tacttgcaac agcaggggtct gtaccactg 120
cagaatctca ccagtcctc ccagcagccc tgtcagcagc cactactgca tccccatctt 180
ccagatggga ggctgggccc agagaaggcg ggtgacttgg ccaaggccac acagctggta 240
atggtggctg gtgcagtgga accgggcagt tggggttcaa cacacgggtt cccattacc 300
acccaaaacc cccacaagg tgccgtggga tgcaggctgc agtgcggcgg atgcagattc 360
tgggttattt tagaayagcc tagaaggctc tcctctcctg acagggattc caagatctat 420
acaccttcgc attgtggtaa aatacacgtg gcctaact gaccattgat aacatttagt 480
acagtcatag cactttgcaa ccaccacctc tatctagttc cagaatgttt ttgtcacccc 540
agaaggaaac cctgcactca taagcagtca ctcccctccc cctcccactg gtaaccgctc 600
acctcctccc tgtctctgtg gatttgccta ttctgggcat ttcatgtgaa aggaatcaga 660
cactatctgg cctttcatgc ctggcgtctt tcacctggcc tcatgttttc agggttcaca 720
acgttggacc aggcatcagt cttctgttcc tttttatggc tgaataatat tccattgcac 780
agacagacca cagttggttt ttttgcttac cagttacgac catttatggt ttgggttggtg 840
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```

```

<210> 20
<211> 602
<212> DNA
<213> Homo sapiens

```

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<220>
<221> miscfeature
<222> (238)..(238)
<223> SNP182=A/T

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<400> 20

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tcccaggtca cggttgaggg tgaggcccca gggaggcctg ggatcatgcc agggcaggca      60
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gtgtccccag gccttgctgt gtggccacag gcattttgct gcgcctctgc gtcctaggag      180
tggggataag cagcaoctcg gggctggcat ggggactggg taggagcgca gagacacwga      240
gcgccttggg aagtcttggg cctgcatgtc actcggggct ggaagtggct tctccacacc      300
tggtcacttg ctggctggcc cccactgat gagacggggt ccttgcagct ccacttctcc      360
ccatacattt ctttctgcc tcgcagctct ggggtgctggg gcttgtctct gccaaacctt      420
cccgagctg acagtaggga ccagatctct ccttgtctgc ctggaccgtg gtgtgtagtg      480
acagttctgg gatatatgcc cctctctagg acagaggctg ggtacggagc tctgagcatt      540
ttcctccaac ctgggcttct tcctctgga tcaactgcacc tgggcagaga ggccaagga      600
aa                                                                 602

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<210> 21
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP183=A/G

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<400> 21
aaaccttccc ggagctgaca gtagggacca gatctctcct tgtctgcctg gaccgtggtg      60
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gagcattttc ctccaacctg ggcttcttcc ctctggatca ctgcacctgg gcagagaggc      180
ccaaggaaac aaatctcctt gattcttttg cttgtcattg agaaactcaa tgctgagcat      240
gagttgaaat ttcaggcatg ctgagctgaa attcctgtgg cagcagctgt tctcaggaac      300
rtgtcagttc cataaggcag gtgcccccat actgtgcaag ataaatgtgt ttccgggtgt      360
cagcaggcag gactgccctg gacaactgtg taggttgttc actccacaag ggggtctgct      420
gggggtgggt ttcaagtcca ctctgtgctc tgcccccat gctgtgcaca gctgctggca      480
tgctgccta gagtgggggg ctttctcaca tttgcacaaa ggtattgtgg gctcacagag      540
gtggcccatc agcaaacgcc tcaagtctat gggcagaatt gtgggtctgt gtgcgtgcat      600
t                                                                 601

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<210> 22
<211> 1001
<212> DNA

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<213> Homo sapiens

<220>

<221> miscfeature

<222> (501)..(501)

<223> SNP184=A/G

<400> 22

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ctcgccagac tctaaaatgg agtcacaacc cagaaagagg cccagagccc ctcttccagg      60
gaagcaggca cagcacagtg aagccagctc ccaatacagt ccattgtcca tggaaaaaaaa 120
aaaaaaagca tttagtggga atgcagaatg gtgcagctgc agtgaaagag tttgaagggt 180
cctcaaagag ttaaacacag aattacccaa tgaccagca attccatgcc tacttataac 240
cccagaataa ttcagagcag ggtcttagac cgacacgtgc gcatgagtgt ccacagcagc 300
accattcagt agccaaaaga tggacgcaac ccagtgtcta cggacagagg gatgaataac 360
actctgtggt cgagccatac agtgcgacac tcacagaaag gaatgaaatg ctgacacgtg 420
ttccaacaag gagagcctca gagacatgat gctgaatgaa agaagccacg aagcacccca 480
ctttgcatga ttgcatttct rtgtaatgtc cagagtagcc aaattcacag cggcggaaag 540
cagacgttgc cggaggctgg ggggaggggc aatgggaggg acggcccttg gggacggggt 600
ttccttctgg ggtgatggaa atgtccagga accggaagaa ggtgatgggt gcacaccctg 660
tgattgtgtc gaatatcact gtacactttt gaatggtgaa ttttatgtgt atttttacat 720
tttacatttt tagactttta tttttgtaga gatggggtct tgctgtgttg tctaggctgg 780
tctcaaactc ccgggctaaa ccgatcctcc tgccttggcc tcccaaagtg ttgggattac 840
aggtgtgagc cactgtgcct ggacttcttt ttaaaaagac aatcgattca aggtctcaaa 900
tacagagact cctaggtgca aattctacat ccttattcca gtgtcagaac tgctgagaat 960
gtccaaccta gtccaatca caaccggggg gcccatgtca t 1001
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<210> 23

<211> 902

<212> DNA

<213> Homo sapiens

<220>

<221> miscfeature

<222> (501)..(501)

<223> SNP185=A/G

<400> 23

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agtgggaatg cagaatggtg cagctgcagt gaaagagttt gaaggttcct caaagagtta      60
aacacagaat tacccaatga cccagcaatt ccatgcctac ttataacccc agaataattc 120
agagcagggg cttagaccga cacgtgcgca tgagtgtcca cagcagcacc attcagtagc 180
```

```

caaaagatgg acgcaaccca gtgtctacgg acagagggat gaataacact ctgtggtcga 240
gccatacagt gcgacactca cagaaaggaa tgaaatgctg acacgtgttc caacaaggag 300
agcctcagag acatgatgct gaatgaaaga agccacgaag cccccactt tgcattgattg 360
catttctatg taatgtccag agtagccaaa ttcacagcgg cggaaagcag acgttgccgg 420
aggctggggg gaggggcaat gggagggacg gcccttgggg acgggggttc cttctggggg 480
gatggaaatg tccaggaacc rgaagaaggt gatggttgca caccctgtga ttgtgtcgaa 540
tatcactgta cacttttgaa tggatgaattt tatgtgtatt tttacatttt acatttttag 600
acttttattt ttgtagagat ggggtcttgc tgtgttgtct aggctgggtct caaactcccg 660
ggctaaaccg atcctcctgc cttggcctcc caaagtgttg ggattacagg tgtgagccac 720
tgtgcctgga cttcttttta aaaagacaat cgattcaagg tctcaaatac agagactcct 780
aggtgcaaat tctacatcct tattccagtg tcagaactgc tgagaatgtc caacctagct 840
ccaatcacia cccggggggc catgtcatct ggccccctcc cctgcttgcc tggcgttccc 900
tc 902

```

```

<210> 24
<211> 789
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (501)..(501)
<223> SNP186=C/T

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```

<400> 24
tttgaaggaa tctgccaaagt tccctgagcg cccccctctc agagtcccct gcaggggtgt 60
ccccaacagc ccctccagaa tttaggcctg agaagcggag gagggaaacc tccccccagg 120
atgctcatta ggaaagaagc cccaggggcc agcatggcag cccccaaaag atatgtccta 180
gtccccggaa cctgtgaata tgactttatt tggaaaaagt ctttgcaaat gtaattatgt 240
ttctcaacag aatatgacct gggatttatg gtggttttaa atccaatgac acgtgttctc 300
gtaagagaca gaagaggagg agacacacag ctgggagagg gcatgtggag atgaagtcag 360
agacaggatg cagccaagcc aaggaacgct gggagcccc agaagctaga agtggcagga 420
ggcctcctcc ccggagtctt gggatggcac ggggccctgc cacacctggc tgcagccctg 480
tgaggctgct gtctgacttc yggctcccag gactgtaggg gaacacattc cccttgcttg 540
aagctgcccc gttttagacc acttggtggc agcccaggcc actcaaacac acccaacaaa 600
gtgaagaaat aggcggctgg gccctggctc agtcctgcag aggcacgagt cagctctgcg 660

```

```

gaggggaccc tcgacattct gctggcaaca gggaccgtgt gtgcggggcc aggcctggtg 720
tagccgacgt caaccctgca gcaggtcaca gaggcccggtg ggggggtcttc caggaggcat 780
tttatgggg 789

```

```

<210> 25
<211> 835
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (501)..(501)
<223> SNP187=G/T

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```

<400> 25
tcatgagtgg atgagcaatc acagacagca ccacaggctg gcggaactc cggcgctctt 60
atctaccag cttctccctg cccagactct gctgtgggga ccaggatgta atctgggcgc 120
tgacctatgt ccacctctc ctggttcagc tgggatgagc catgaccag caggctgggg 180
tttccaggga gtgcgcttct ctcccggggg ggccgtagca gagggcctgg gtgctttaac 240
cacagacgtt catgttccta cagtccctga ggtgaagtcc aagatcaagg tgtgggcagg 300
gtgggttccct ctggggactg cgaggcagtt totgttccaa gcatttttgt gccctggtg 360
gtggctggca agccttggtg tccctggctt ggaggagcat caccctctc tgcctccatc 420
ttcgctggc cttccactg tgtgctgtc tgcgccaaa cctccctctt cttacaagga 480
agtgggccag tagatcaggg kctgccctac ccttgtgacc ccatcttaac cagtcacatc 540
gcaatgtccc aatttccaag caagacctca ctctgaggta atgggggtta gggcttcaac 600
gtaagaatcc aggggaacac gattcattcc acagccgtga gttatgggca tgcttgtctc 660
atctcacatg cctccccag gccagtgtcc ccaagagcag gggccagggc tcacctatc 720
ctgcaagaag gagaacagaa ccagcaagcg gggcgccac gggcaggta aggggacggc 780
gtctgagaaa cccaggcagg ctggggcccc tccctcctgt ggagtcgagg tgatg 835

```

```

<210> 26
<211> 788
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (501)..(501)
<223> SNP188=A/G

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```

<400> 26

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ctgccaaca tggatgaagcc ccactctctac taaaaataca aaaattagcc ggggtgtggtg      60
gcgggcgccct gcaacgcccc gccactcggg aggctgaggc agaggttgca gtgagctgaa      120
atcacgccac tgcactccag cctgggcgaa agagtaagac tcaaaaaaaaa aaaaaaaaaa      180
actcagatat aaaactcagc acgctaacct gttagcgagc aattcagtgt cactgaacac      240
acaatgtcca gaacattctc atcttcccaa actgagcctg tccctgtgaa ccactaactc      300
cccatctcct tccccagccc ctggcactca cctccaact ttctgtctcc atggacttcg      360
ctactctaga agcttcgtat gactgggatg gttcagtgtc gagcttgtct cccgtgactg      420
gcttatttca cttggcataa taccctcaag ggtcctccat aggaggcctt tgtagccagt      480
gtcggttttc cctcctgcct ragatggaac gatgctccct gatcgggata caccacattt      540
gccttcctcc tgcaccggtg atggacactt aagctggccc ttacacctga gaacacctgt      600
ccttcctgca gcctggctgc acctctaagc ctccctact catcagcctg gcgggaacag      660
taggaatagc caccggcccc ccaccaacca tccttggtt catcaagaaa atggacagct      720
ggctgtgctg gctgggcagc ttctggcgt gccctcctgg ccagtcacct ctgcaggtag      780
caggtggg                                     788

```

```

<210> 27
<211> 723
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (223)..(223)
<223> SNP189=C/T

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<400> 27
accatgcaa accagagagc tcctcactca gaagcttctg cacaccccggt gacagtggct      60
agaggggggtt tactgccag gatccacgct actcctctgt gcacgggcca ctgagtgtccc      120
agtagtgccct gggcaaatgc tgagtggctg ctgcatggca tggttgagtt attgcagaga      180
agttacaaaa acagactaca tagtgagctg accggtggcc ctygaaagat atgtccatgc      240
ctttaacccc tggcacctgc caatgtgacc ttatttgga acagcctctt tgtagatata      300
attaagttaa ggatttcgag atgagatcat cctcggttac tgaagtgggc cctgaatcca      360
gtgacgggtg cccttatgag ggatgagaag agagaggagg atgaggctgt gtgacgacag      420
agacacaggt tggcaccatg tggctagcag ccaaggaata ccgggagccc cagagctgga      480
ggaggcaagg aaggaccctc ccctagagcc tagagggggc tcatggcttt gccacacct      540
tgattttgga attctggcct ccgaactgtg agaaaatcca tgtgtgtcgt ttgcagcaca      600

```

```

gcccttgagg gtgcatgtgg gctgtgctca gccctgctta tgggacacgg ccatagcctc 660
ctgaccctca ctgggcaggg ctctgggact ctctccaaca cctccactct aaccatcagg 720
tcc 723

```

```

<210> 28
<211> 1044
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (844)..(844)
<223> SNP190=A/C

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<400> 28
gcttttcatg gaactggaac tgcagtttga tggccgggca cctttcagat cagaggatgc 60
tctgttagag aaaggcacgg aggagccaca cacagtctgc gttgtgaaat gggatatttg 120
ttttcctctc ctctactgac acatggctcc taaaatctca ggaccctcca gagtgtgag 180
tgtctttgta tgctagttag atgactgggtg gctgggggtc cctagatagc ttcagaatgg 240
gggctgggta ccaaaagaac caatcccaag attagagggt tggaattttc cgccctgccc 300
tccagcctcc agggaggaga gagagaggct gaagggttag tcgatcacca atggccaatg 360
attgaatcaa tcatgtccgt gtaatgaaac ttccataaaa cccccaaaag gacagggttt 420
ggaggagttt ctgaatagat gaacacgtgg aggttccttg ggggtggcgt gcctgggcag 480
ggcatcaaag ctgcacgcct tcccctgtac ctcacccac acatcactcc atttgtaata 540
tcctttataa gaaaccggca aacgtatttc cctccattct gtgagctgct ctagcaaatt 600
aattgaacca gagaagggca tcatgggaac cctgattcat agctggtcgg tcagaggcac 660
aggtcacaac ctggggcttg ttcttggcac ctgcaaagga cgtggggccc atcttgtggg 720
actgagcctc accctatggg atcaacacac tctccagggt agcagtgcag aactgaattg 780
aattaggggc acctgctggt gtccgaggga accgattgct tgcttgctgt gtgtgggaac 840
cccmctcatc tggccactga gggctctgtg tggattgcgt tgagagagta tagtgggaag 900
aaactgagtt tgctttttcc tatagcctca cagtcccccc aaatttggcc tcaacgagag 960
gctgttagca gacacgttcc catttcttaa ggcaactttc cagaagtcag gaaacagcct 1020
atttgaaaaa cccaaccctg acct 1044

```

```

<210> 29
<211> 1001
<212> DNA
<213> Homo sapiens

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<220>
 <221> miscfeature
 <222> (501)..(501)
 <223> SNP191=A/G

<400> 29
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 gctggctctg ggtgtctcca gcgtgtcagg ccctcgaggt tcctccagct gcagaacctt 120
 ctggggggca tcctgccttg gccagctctg tgcttgccaa gctatgatta agattctttg 180
 cttcaccaga ctccctggac ttctcctgag tccatctgtg cgcttccgta tcaaatccaa 240
 ctttagcaag aactcccgac cctggatacc tgatcaggcc gctcacctcc cacccccacc 300
 tgggatgtct gctcacccca gcctgcctgc agcaagaatc ccattaggtc agtttaccca 360
 gaatctccct cacccttgat gcttccactc aggaattttc caccctctca ctcccaccca 420
 ctctggggcc ctaaattccc actagcccat gcagtattag gaactgagtc ctatcccgta 480
 ctaagtctcc tccctattca rtattctgct actcccctac cgcaatagtc ctggataaaa 540
 actgtattta ttaacaactt ttttttgaga cagagtctcg ctctgttgcc caggctggag 600
 tgcagtggta caatatcggc tcaactgcaac ctccacctct tgggttcaag cgattctcct 660
 gcctctgcct tctgagtagc tgggattaca ggcacctgtc accacacctg gctaattttt 720
 gtgttttttag tagagatgcc gtttcaccaa gttggccagg ctggtttcaa actcctgacc 780
 ttgggtgatc caccacctc accctcccaa aatgtaggga ttacacgcat gagccaccgc 840
 acctgtccta tcgctttaac ttctgttcag ctctagtcac cccacagccc agcacagagc 900
 aggtgcctgt aatcccagct ggacagcgtg tctgagtatc aaacagctat tcctcagtct 960
 tgaggaaggt acagatctga tttgaaaaga aaagcaactt c 1001

<210> 30
 <211> 729
 <212> DNA
 <213> Homo sapiens

<220>
 <221> miscfeature
 <222> (501)..(501)
 <223> SNP192=C/T

<400> 30
 ctttctcccc taggaggcag gtgtggtcta tgggagaggc tgccctgcgc aagtgtgtaa 60
 ccctggctgt tgggatcacg gggtattgtg ggttgaaaag tgttaccccc aaacctatgt 120
 ccatgtccta acccccggag cctgtgagcg tgaccttatt tgtaaacagg gtctttgtag 180
 atgtaatcaa gttaagatga ggtcactggg gtacatccta atccagtcac tgggtgttctc 240

```

aaacaagagg acaatgtgga cacgcatggt gggaaggagg ccaggtgaac actgatgcag 300
agatgggggc tgctgctgca agccaagggg tgctaggggt tgccagcagc caccgggagc 360
aggaagaagc tggaggagta ggcaaggctc ctcccccagg gccttccggg aaagcatggc 420
cctgctgaca tcccgaactt agactgctag cccccaaact gtcagagacc acgcctctgt 480
tgttctagcc acaggggtctg ygggacgctg tgacagcagc cccaggaaat ggattcccag 540
gcacagctgt gcacacgggg gcgctcgacg tgaaagctca tgctgaccac acaggccctg 600
agaccatggt ccgacttacg taggtactta tcacaggctg caagcaccgc agcccccagt 660
gacctgtgca gcggaacaaa ggattccacg ccgactgagc caaaggcatc ccttcagac 720
atggatgag 729

```

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<210> 31
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP193=C/G

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```

<400> 31
gccaaagcctg tgctgccagc ttcccagccc gaggcacggg ggagcccgtg ggggtgtgag 60
cttcctccct cctgggggtct gtacatttta ttggagagca tggatgaaac ttaaatacga 120
tgagtaattc caggcagtac ccaagaccac gtttaccagt gacaatgcct gaggtcaggg 180
tgattcccag gagggctgca tggaggagga ggctttgacc tcggctttga agaataatat 240
gagtaggtga ggtgacagtt ggaaggggca accggcattt cccaggtaca gccaggctgc 300
stgcgaacaa acgcacacag gcgagcagac agagtgggcc tctcctggga ggagagaagc 360
tgagagaatg cctggggcgcc tccagcccag gccaagcctc gggagggttg gactcctggt 420
gccagcagc gccctggaac actcgtgcac caagctcagg gagatttata gctcaattta 480
gttcctgtat gtcccatgtc acagcgagtc atttatcgag tgcttcaact tgacaacaac 540
tgaaaaatta atcccaacag caagcgatta actctgcaag gggatcagat gtctcatttc 600
c 601

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<210> 32
<211> 2934
<212> DNA
<213> Homo sapiens

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<220>
 <221> miscfeature
 <222> (2695)..(2695)
 <223> SNP194=A/G

<400> 32
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 ttatatattt ggaacatttt tggatttaca gaaaaattgc actgcacaga aagttcagag 120
 ttcccagatt cctctcctc cccctcccc caggttcctc tgtagtaac accttgcatt 180
 aatcggtgtg tatttggtgc aattaatgaa ccgatactga cacattataa ttaactaaat 240
 ccacagtcac cagaggggtc cttctgggca ttgtatatc gttggttgta actatctata 300
 acgccccgtt cccccactcc agtgccatac agaagagcgc cactgcccac caatgggtgt 360
 gccccatctt tcacctccc tgcccccaat cctgggcaac tgctgatttt tcaactctc 420
 catttttttt tttttttgag aatgtcatat acaggcacac ctcaattcat tgcacttcac 480
 gaacattgca tttttttttt ttttaacaaa tcgaaggcct gcagccaccc cacagagagt 540
 cagcccatca gcaccatttt cccaacagca cgtgctcact ttgcatctct gtgtcacatg 600
 ttggataatt ctcaaatat tccaaacttt ctgtctgtta tcgtgatctg tgatctatac 660
 tttttgatgc tactattgga tttttttggg ggtgccgtaa aacacactca aataagatgg 720
 tgaatttaac cgataaatat tgtgtgttct gactgctcca ccgactgtcc actcctccat 780
 ctctctccct ctgtgcaggc ctcttactc cctgagacac aacactattg aaatggggcc 840
 agttaagaac tctacaatgg cctctaagtg ttcaagtga aggaagcgtc acacatcatt 900
 cacttttaac caaaagctag aaacaattaa gcttagtgag gaaggcatgt tgaaagctga 960
 gacaggctga aagctaggct ttttgtgcca aagctagcca agttgtgaat gtaaaggaaa 1020
 agatctagaa ggaaattaaa agtgctactc tgggctgggt gggcggtc acgcctgtaa 1080
 tgtcagcact ttgggaggcc aagggtggag gatcacttga gccctcgagt ttgagacccc 1140
 atctatatga aaaataacaa ataaattagc tggacatggt ggcatgtgct ttaggtcgc 1200
 agctactcca gaggtgagg cagtggatca cttcagtga ggggtttgag gctgcagtga 1260
 gctgtgaata tgccactgca ttccagcctg ggtgaaagag tgagaccctg tttcaaaaga 1320
 acaacaacaa caaaaaagcg ctactccagt gaacatacaa attatcagaa agtgaagcat 1380
 cctcattgct gaaatggaga aagtttcagt ggtctggata gaaaatcaag ccggtcacia 1440
 cattccctta aaccaaagcc taatccacag caaggcccta actctcttca agtctatgaa 1500
 ggctgagaga ggtgagtaag ctgcagaaca aaagtctgaa gctagcaagg gtgattcatg 1560
 aggttgaagg aaagaagcca tatccataaa ataaaagtgc gaggtgaaac agcaagtgtc 1620
 gatggagaag ctgcagcaag ttctccagaa gatctagctg agatcactga taaaggtggc 1680

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tacactgaac aacagggtttt caatgtagcc tgttttaggtt agcttctttt gcttaatgat 1740
acggatttaa gtttcctcca tataatttgt gactcaatac acctcatttc ttttttatgc 1800
ctcgatagcc atttcttttc attgctgaat acttttccat tgtctgaata tatcacagtt 1860
tgtttgacca ctcacctact gaaggacatc caggctacat ccagtttttg gcaataaagc 1920
tgctataagc acttaacgtg cagcctgatc acatttattt tctctctgtc tctttctttc 1980
tttctctctc tctctctctc tctctctctc tagctttcct ttattttttt gtcttgctct 2040
gttgcccagg ctgggttgcc aggatgcagg cacagttcac tgtagcctca aactcctggg 2100
ctcaagtgat cctcctgcct tagcctcctg actagctggg actacaggga cccaccgcca 2160
tgcccagcta atttttttct tttttttttt tttttcttga gacagggctc cactctgtca 2220
cccaggctgg agtgcagtgg tgtgaaatca gctcattgta gtctcagcct cccaggatca 2280
agtaattctc ctgcctcagc ctctgagta tctgggatta caggcatgtg ctaccacgtc 2340
cagctaattt ttgtattttt agtagagatg gggtttctcc atgttgacca ggctggctctc 2400
taactcctgg cctcaagtga tccgcccgcc ttggcctcct aaagtgagcc atcgctcctg 2460
gcctcatttt ttctcatttt aaattttttt tggtagagat ggggtcttgc tgtgttgccc 2520
aggctggctc ccaattcctg ggctgaagtg atcctcctgc ccttggcctc ccaagggtgt 2580
gggattatag gcatgagtca ccacacctag gcgagcctga ctgtattttt acaaagccag 2640
ggccataaat gtagtggcat tgctggtgtg actcagaagg acccaaccac ttccrtattt 2700
caagtgtcct ccacatacca ggcatcgac taaaagcctc attcattcat tcattcattc 2760
attcattcat tcattcacct cttactcaa tatttaccac gtgcctccta gatgcaggct 2820
gtgtcctggg tgctgggaat gaagctatca actggcctca ggatctcacg aattacagac 2880
aaaaagcaag caagcaaaca gatgatcaca tgtgagttcc agggcgggga ctga 2934

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<210> 33
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP195=A/G

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<400> 33
tcattcattc attcacctct tcaactcaata ttaccacagt gcctcctaga tgcaggctgt 60
gtcctgggtg ctgggaatga agctatcaac tggcctcagg atctcatgaa ttacagacaa 120
aaagcaagca agcaaacaga tgatcacatg tgagttccag ggcggggact gaaccaggc 180

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cagcccaccc tgaggctctt gctgctaacc accacctcct cctaagaagg gactcacatg 240
gagggcggtc catatggaag cttccagaca gatgttctgg atgctcagca gtgggggagg 300
rgcccagatg gagttggcag tcctggctct gaggctggat gtgacccttg ggaggctcat 360
tccagagctt gatgtcggtc ttgctgctaa agccgggagc agggagcagg ctggcagcac 420
cgcgggggcca gggcaagagc tgacagtggg gcctggggga gctgtgggtg gggggccctc 480
acagctgtgt cctccaagat tcccacagtc tggaaggaca agcagaaagc cccctgacct 540
gggctttcct gtgcaaaggc ccaagtgggt ccggagatcc ccagtgatcc cgaggaggct 600
g 601

```

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<210> 34
<211> 2201
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (201)..(201)
<223> SNP196=C/T

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<400> 34
gggccagagg gcatctgcat cgatcatttt cataggaatt gatgagctgt cctccaagga 60
ggacgtgcat cgtaacctct ccccaaaaca gaagacggtg cgccctgcc agtcccctcc 120
tgcccaaatg gtagatgac agactccaaa aaaagagccc tcacacaaaa cagccctttc 180
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gattacgggc acacaccacc acgccaagct aatttttggg tttttagtag agatagggtt 420
ttggcatggt gaccaggctg gtctcgaact cctgacctca agtgacctgc ccgcctcaga 480
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agtggagcag aatgtctgg atcctctgga cccccggtg agtaattcta tatactagca 600
aaaaatgatc acaaacagaa attcgaaaat acctctacca tatcttcaaa aaatacaaac 660
taggaataaa tagaacaaaa gatgtgccaa gacctgtata gcaaaagcat taaacatggc 720
tgagagaaat ggaagatctc aataaatgga gaggttttag atcatgtggc aggagactga 780
atctctccca actggatcta tggactcaat gtaattcctg tcacatcccc agtagggttt 840
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aatgcaaaat atctagagta agcaaaacaa ctgtaaaaaa ggacaaagtt ggaggactaa 960

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cttgacctga ttccaagact ttttttcggt tgtttttttt tttgagactg ggtcttgctc 1020
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gttcaagcga ttctcctgcc tcagcctcct gagcagatgg gattacaggc acccaccacc 1140
acaccagct agtttttgta tttttagtag agatgggttt caccatgttg aaccaggctg 1200
gtctcaaact cctcaagtga ttcgcctgcc tcggcctccc aaagtgccgg gattacaggc 1260
gtgagccacg gtgcccggcc cacttactat aaagatacag taatcaagac agtggcacca 1320
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caagtgatgt tcccacttca gccttcagag tagccaggac tgcagacgtg caccgtcaca 2040
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ctggtcttga actccttgcc tcaggtgatc ctcccatctt ggtctcctaa agtgttggga 2160
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<210> 35
<211> 1001
<212> DNA
<213> Homo sapiens

```

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<220>
<221> misfeature
<222> (501)..(501)
<223> SNP197=C/T

```

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<400> 35
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ctagagtgca atggtgtgat cttggctcac cgcaacctcc gcctcctgga ttcaagtgat 120
tctcctgcct cagcctcctg agtagttggc attacagggt catgccacca cacctggcta 180

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atattgtatt tttagtagag atgggggtttc tccatgttgg ccaggctggt cttgaactcc 240
cgaccccagg cactgtcttt ttatctgaaa gacaaccttt catattcttt atagtgtacc 300
tgctggtgat gaatgattaa accttttgta tttttcaaaa gtattttacc tttgttgaaa 360
taattctggt tgaattatgt tgaaataact ctgttgaata attctgtttt ttcttctctt 420
tcaatactgt aaaggtattt gtccacgac tgctcactgg cattgcttct gacactatgc 480
ctgctgtcat ctttctcttt ygtcttcatg tgtcacgtgt ccttttatcc ccatgtggct 540
gcttttaaca tatttgtcct tatctctaata ttggagcaat ttgaatccta tgtgcctggg 600
tgtgtttttg tttctttttc tctcatgtgt cttgtgcttg gagtctattg agctgcttgg 660
gtgtgtgagt tcattgttta cttcaaattt ggaaaaagtt ccctcattat ttcttcaaatt 720
atctttcttt tcttttcttt tttttttttt ttgagatgga gtctcaccct gttgccagg 780
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tctcctgact cagtctccca aatagctggg attacaggca cccaccacca tgcccagcca 900
acttttcata ttttagtag agatgggggtt tcaccgtgtt ggccaggctg gtctcgaact 960
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```

```

<210> 36
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP198=C/G

```

```

<400> 36
atccaaaggt ctctgaacag gaaatagaga ggaaatggat tgctaagtgg ttatgatgga 60
gactaaatga attacttggt aatcaccctt gtctgctctg gtagtatctg tgcaagccag 120
gatagctgct cggggcacac tcaccatcaa acacgggagg ggaagggcag ggtggggtaa 180
atttactct tagaaacacc agaatttctt ccttttcagg atcaatgtca cccatatctt 240
gtcaattgtg actgcaaact tcagaaggac tcagagtgga aagtcttggc aaccatgttg 300
sggttcagac agtgggagcc atgcttctgc gaatgagcct ggggactggg gactgtggtc 360
ccagccctgg atttgatgag gggagtatcc ctgtcctgcg agggtgaggt gtcacttttc 420
cactccatt tggggtcaac tcttaacagc atccctgaga agtgaggtgg tgtaaagtca 480
gggaagtgtg gtctttgtct tattaaaaat aatgcgatga gatggacgat ggcagaagct 540
tcagggtaga ccatggagct catcatggta tttgatatgg cttggctttg tccccacca 600

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a 601

<210> 37
 <211> 601
 <212> DNA
 <213> Homo sapiens

<220>
 <221> miscfeature
 <222> (301)..(301)
 <223> SNP199=C/G

<400> 37
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 cccgtgtttg atgggtgagtg tgccccgagc agctatcctg gcttgcacag atactaccag 180
 agcagacaag ggtgattaac aagtaattca tttagtctcc atcataacca cttagcaatc 240
 catttctctt ctatttcttg ttcagagacc tttggatatg ccaatctgaa taattgattg 300
 sagcagaaaa gcctcatgcc tttgaagtcc ctcatattt acctggacag gaagaaggaa 360
 gaatctctac tcagccacaa agcggctaaa cacgatcaaa gaaaccatac ccggctttga 420
 tggttccctc cgtttagccag aggcaccatt tcccctcaag gctggaggaa tgcttctgga 480
 accctctgag ctgctgctga atgccaccac cattgttatc ggggtggtgcc accatctact 540
 ctaagttaaa cacaccgggc tatgattgat ggagaggtgt ctgcagagca tctgttatga 600

a 601

<210> 38
 <211> 1479
 <212> DNA
 <213> Homo sapiens

<220>
 <221> miscfeature
 <222> (1279)..(1279)
 <223> SNP200=A/T

<400> 38
 ggtagggctg ggtgctgtgg gctgaatgtc catgtctctg caacattcct gggttggacc 60
 ctaacctcca atggcatggt gttgggggtg aggcctctgg gaggagactg agcccttgtg 120
 atgggatcgg tagccttata aaagggaccc cagagagctc gcttccactt tctccctctg 180
 ccacttgagc acagcgtgag aaggcggcca tctccacacc agggacaggc cctcgccaga 240
 atccggccct gccggcatcc tattctcagg cttcagcctc cagaactggg agaaaatcaa 300


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ccccctgttgg gttttgagac ggagtctcac tctgtcgccc aggctggagt gcagtggcac 360
gatctcggct cactgcaacg tccacctccc aggttcaagg gattctcctg cctcagcctc 420
ctgagtagct gggattacag gtccccacca ccatacccgg ctaatttttg catttttagt 480
agagatgggg ttttgccatg ttggccaggc tggctcttgaa ctctgacct caagtgatcc 540
tctgtctcg gcctcccaaa gtgctcgaat tacagccgtg agccaccatg cctggtcacc 600
cctgctgttt tgaagcccct ccatctaggg tattttgccc tagtggattt agctgactca 660
gacagaaggg aagggaagga aactaaggga ggagagagaa gagggaaaca aggagagaaa 720
gccctctgt tccccacaac attccacttc cggcttcaca gaagacacag ggatggttgg 780
caagaataag aaaagaggcc caacatcagg ggtctccagg gaaatgtgag ctaaagtcac 840
aatgagacgc cacctcacac tgttccaaat gaaaaagacg gcacacacca agtgccggcg 900
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tggaattca cagcaacttt atgcgtggta ggtcggagtg gctgcaacca aacgcccac 1140
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cgcaaggaa cggactgccg gaacacacac gcctcagaat aatcacactg cctgagagga 1260
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caggctgctg tgatgtgacg gagctggcg gtactgcag cgggtgggggc ggggcagggc 1380
tgtgatgtga gctgggtggc cactgcagcg gtgggggcgg gggggctgtg atggagctgg 1440
gtggtcactc cagcgggtggg gggggggggc gggggcagg 1479

```

```

<210> 39
<211> 401
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (201)..(201)
<223> SNP201=C/T

```

```

<400> 39
caagacccat gcacctggcc ccagcccgg gtccttctcc aaacatggac acttctcagg 60
aagtctgatc tctcctacc agcgcggagg gatggccaag cccccagcat ggtgctgatg 120
gagaactcgg ccagttcctc ttgtctatga ccacagggt cagagcactc atggcgggcc 180
ctgccaatc tctcttagac yctgcctcag ttaccctgc tgatcaatct ccagatgggc 240

```

```

cgacacagac tgcggaggtg tggcccaaag ccagcccatg cttgtttggg gcctttcttc 300
tgagcttccc cactctccc acagcctgct ggggaactcat accacagggc actaaattcc 360
ccaccttccc cactgggaga ggcaacatca gggtagggg t 401

```

```

<210> 40
<211> 401
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (201)..(201)
<223> SNP203=C/T

```

```

<400> 40
caagacccat gcacctggcc ccagcccgg gtccttctcc aaacatggac acttctcagg 60
aagtctgatc tctctctacc agcgccgagg gatggccaag ccccagcat ggtgctgatg 120
gagaactcgg ccagttcctc ttgtctatga ccacagggct cacagcactc atggcggccc 180
ctgcccaatc tctcttagac yctgcctcag tttaccctgc tgatcaatct ccagatgggc 240
cgacacagac tgcggaggtg tggcccaaag ccagcccatg cttgtttggg gcctttcttc 300
tgagcttccc cactctccc acagcctgct ggggaactcat accacagggc actaaattcc 360
ccaccttccc cactgggaga ggcaacatca gggtagggg t 401

```

```

<210> 41
<211> 748
<212> DNA
<213> Homo sapiens

```

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<220>
<221> miscfeature
<222> (201)..(201)
<223> SNP204=A/G

```

```

<400> 41
catcctcagg tgagcagga aggtgccatt cctgaaacc actcttgagg ggctggaata 60
aaagttcaaa agcaatctgc gttcctcctg tottggggga gcaggagtct ctgtttcttg 120
cagcctgttg tggttctggg aagtacagtg tgccctgcag gcatcctgcc gggattcgag 180
tcctaccttg gacaggcgcc rtatctgtag gccgcttccc tgtctgtgca atggcgagag 240
tacagtgtat gagatgccat ggcaccgcac taagtcagt tgtcttcgtg tgtctgagtc 300
agctcaggct gaccacaacg cccacagac tgggcggctt acacgggacg ttggtgggct 360
cacattctgg aggctggaat gggagatcaa gatggaacag ggctggttcc tcctgaggcc 420
tctctcctgg gctcgattc agctgccttc tccctgtccc ctcacaggtc atccccacca 480

```

```

gtgtgtcagt gtcctcatct ccttaaagga caccagtcct actaggtcag ggcccaccct 540
aatggcctca ttttaattta atcagctcct tcaaggccct atctgcaa atcagtcacgt 600
tctgaggttg tgggggtcgg gactgtaaca caggaatggt gacccacagt ttacctccgt 660
ttatcagccc acctggctgt ggggtacagt gcagccaggg caggagagcca cgagtccagt 720
gcctgaatgc tcaggtgggg gtgggcct 748

```

```

<210> 42
<211> 701
<212> DNA
<213> Homo sapiens

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```

<220>
<221> miscfeature
<222> (501)..(501)
<223> SNP205=C/T

```

```

<400> 42
gactgtatct gcagataggg ccttgaaaga gctgattaaa ttaaaatgag gccattaggg 60
tgggccctga cctagtagga ctggtgtcct ttaaggagat gaggacactg acacactggt 120
ggggatgacc tgtgagggga caggagagaag gcagctgaat gcgagcccag gagagaggcc 180
tcaggaggaa ccagccctgt tccatcttga totcccattc cagcctccag aatgtgagcc 240
caccaacgtc ccgtgtaagc cgcccagtcct gtggggcggt gtggtcagcc tgagctgact 300
cagacacacg aagacacact gacttagtgc ggtgccatgg catctcatac actgtactct 360
cgccattgca cagacagggg agcggcctac agatacggcg cctgtccaag gtaggactcg 420
aatcccggca ggatgcttgc agggcacact gtacttccca gaaccacaac aggctgcaag 480
aaacagagac tcctgctccc ycaagacagg aggaacgcag attgcttttg aacttttatt 540
ccagccccgc aagagtgggt ttcaggaatg gcaccttccc tgctcacctg aggatggtga 600
tggtgttgcc acagaaggcg aggtctcagg gggacaggcg catcacgacg cacagccttc 660
ccatcctgga ccacagcatt gcacggccca agagctcgtg g 701

```

```

<210> 43
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP206=A/C

```

```

<400> 43

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tgagcaagac ctaatttaaat aaatcagagt agggcctagg gtgtgcagcc ctgtgtttct      60
actcccctgg atccagcaca ggcctcgttc tcacctgcat tcatgctcct ctgtgttcag      120
gttcccacgt ccctttattc agcaacagct gggcagaggg tggatggggg cgcccggctg      180
gtgctgaggt gtgtgggaat gcgctgtaag gggaggccgc ccatcctgtg gggaggccag      240
ggaagagctg agagtgaccc ggcagatggg ctctgggctc attgcatccc cgacatctaa      300
mccatcatga ataagtaaca tttccaagga aagagcaatc atcccccttt gagaagaaaa      360
ccaatctctt ggttatctct gaactgggct aaaatcttcc atgggccatc ctgttgctcc      420
atttcatgta aattagcaga ttcgatgaca ccaagcatga ggtcacgcac ctggctgggt      480
catgatgggtg tgagatgaag gttctgcctg tgagacgtgg ccagggccc cccaccttct      540
cggggacacg ctgtctactc cacaggggag gaaccactgt cagtaccaga atggtgcaaa      600
t                                                                              601

```

```

<210> 44
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP207=A/T

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<400> 44
ctgcccagct gttgctgaat aaaggacgt gggaaacctga acacagagga gcatgaatgc      60
aggtgagaac gaggcctgtg ctggatccag gggagtagaa acacagggtc gcacacccta      120
ggccctactc tgatttatta aattaggtct tgctcagtct ccagggtccag ctcaccctg      180
gcaaggtggc caagggcagtg gatgcatccc cagtccaacc ctgccctgtg ctgggcgtgg      240
ggcatcatat ttctcaagaa aatcatttcc agccagttag ctactgggc taccttagca      300
wctacatgaa acacagatca aagtcctca taggagcatg aagtgtccct gaaaaggccc      360
agctgtggga caggacaatg gtggctgcct ctgaggacag ccagaagagg ctgcagctgg      420
cactacatcc cttcccttcc ttctgcccag aaagtggcgc ttgcaggcca ccccataagg      480
caaagcccag tcttgggtga tggatgaat gtaagacagg catggatgag gctgggcccc      540
aggtggcatc tcccaggcct gggcggtgat ggcatgaatg taagacaggc atggatggag      600
c                                                                              601

```

```

<210> 45
<211> 601
<212> DNA

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<213> Homo sapiens

<220>

<221> miscfeature

<222> (301)..(301)

<223> SNP209=C/T

<400> 45

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cagtcagtct gggctgggga tgggggtggg gtgtgctgt ctgatgagca ggaccctcag      60
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ctcctgaggc ttgcagcagg ctctgtgggc caggggtgctg ccctgtggct gggggtgcag    180
ctcagcactc tgacagccac atggagcggg ggacagaggg aagattgggg gagaatctgc    240
atgggtgcctg gccctggggc aggggcactg ggctgtggct gagaacatgt aaggagagta    300
yggaggccag agcggggatg ccttcatcta tctacgggct caggtatggc tccaaagatg    360
ggggattccc aggctgactc cagaaggcct agcagcatgt cccaactga tgcaagaggt    420
gggaggaggc cttgctggca gagggagcat gtggcgagaa ggtgacctgg agggcaaggg    480
tacagggccca ggatagagcc agaagatcca gccgcagAAC aggggccagc gtgtggcagc    540
agcatccaca gtgcctgat cttcggggct gtggcacagg cagagggagt ccagtcctgc    600
c                                                                    601
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<210> 46

<211> 650

<212> DNA

<213> Homo sapiens

<220>

<221> miscfeature

<222> (267)..(267)

<223> SNP210=C/T

<400> 46

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ccaaggaggg cagtgccagg aaagcgcagc taaatgccag ctgcccagat ggcacggaaa      60
acatgcactc cgggtcatcg aatcccaaAT tctactggggT tgagccccct ccatcttgag    120
tggctcagga taaaatctgg agcctgtcca ctccacgctc actgtcagga gcctcctaAT    180
gaaccatcga ggctgtgtgt cccttctgca gtcttttgtc caccagtggt ccagaacgat    240
cctccgaac ccaacaagat ctacacatca cccayggta taacgtctgc gggctgcccg    300
ctcctcacag gtaaaagcca gcatggccca gtggccca ggttcccaag gcctggccca    360
gccatgcctc ccctctctcc cttgccactc tctgcagctt gctcagccca gctgcacagc    420
cctcctgctt ccctctaacc tctgggcatg gcctgaccac cgtgcatgac tctgcagcca    480
ccgcgagcat gtcctcaag gtctcatccc cggccgaccc ccagagccat tcaattatcg    540
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gccgtgatgg ctgcctgtga ctcggtctta cctgccagcg ctttggctcc actctgccct 600
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<210> 47
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> miscfeature
 <222> (253)..(253)
 <223> SNP213=A/G

<400> 47
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 catagttcgg ggaaggcctg tggctgcccc tgctgcctgt caaagtcctc ccagcaccat 120
 ttccaacatg aacgcacact gtcccagcac gcgtaggact ttggtggcat ttttggctag 180
 gtgtagctcc tctacttatt atattctata atttctcagc agtctccacg cagttctgag 240
 aactcttgct gcrttgagaa aaatctaacc tacagcctgt ttttaaata ga atgttgcat 300
 taacagtga tgaaggtagg atataagta taaatattta ctaatctgaa cattcttgct 360
 gccttttttt attctggggc tgtgaaatgt tgtttctaga tctggatcct ggaatgctca 420
 agagctctta caccaaagtg gtccctggagg aggctgggtc tgtttcatca gactcagcct 480

<210> 48
 <211> 727
 <212> DNA
 <213> Homo sapiens

<220>
 <221> miscfeature
 <222> (501)..(501)
 <223> SNP214=C/T

<400> 48
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 tagcggggga agattgaggc tcaccagaa gtggacttca ccaggaaatg actcagagag 120
 acccagctcc cagccacaaa acccttctct caaactgcgg attgtggcct gatttggaca 180
 cggggtcttt gcagatttag ttaaggaag gtcatgctgg attagggtag gactttattc 240
 cagcgactgg tgtccttggt agagaaaaca gagcgggggt tcagtcgcaa acacagagga 300
 gaacatcgtg aggatgaagc agagattgcg gtgaccacct ccacgccaag gcatcagggg 360
 cacctcgcca ggatacggga aaggcaagaa ggcccctccc caagagcctc cagagggagt 420

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ccaccagct gacaccttgg tttcagaatt ctggcctcta gagctgcagg aggatcaatc 480
tctgcggtgc tgagctgtcc ygcgtgtggt gatttgtttg gcagcccagg cgagccccct 540
tccccgcctg ctctgtgggg cacctgggcc agggctgggc cagagcccg acgcttccca 600
gtgccatggt gcctcctgct gacttcaatt cccacaggca gacctggcgc ctgggaacca 660
agaggggagg ggcattggga ccagttccgg aaggagccac aggcaccagg cagagaaact 720
gtccagg                                           727

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<210> 49
<211> 2201
<212> DNA
<213> Homo sapiens

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<220>
<221> miscfeature
<222> (201)..(201)
<223> SNP215=A/G

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<400> 49
acaggggtccc atagagggggc agatggagcc cgtttgcagc tgcaggcgat ggggcgggac 60
gaatgactga ggtcatttgt cgaatgacct cagggccaca caagttgggc tggagagaag 120
ggtatttgaa ggtggagaag aatagaggaa gaggctggaa atggaggctt ggcagggagc 180
ccttgactat ctgggaagga rctgaaaatg gatctgaagt tagcacaaat gacacaagaa 240
aaaataaaaa ctgaagagt tctgtaacct tgaaagagat tgaaccagaa gttgcaaact 300
ctttcataaa gaaaacatga ggcccagatg gctttctgag caggggtcaag ccatcgcaga 360
aggaacacat aattctaacc cgaacaatgt cttctggaga aaaagagaga aactcccca 420
gcttcttggg agactggcaa gagcttgact ccggttgga aagaatggcc tcagaaagga 480
aaattacaga caaatctcac tcatgacctt ggatgcaaaa atcctaaca caatattagc 540
aatggaatt tggcaacata ttaaaaagat tactacatca tgacaagtcg ggtttatctt 600
aggaagctaa gactgatcta acagaaacat caattaatac aattcattag caaagaaaag 660
ccatgtaatt tttgcaagt atacaaaaaa ggacttgagg aaattaatta tccgcttgca 720
attaaataaa aatctcttgc aactaggaa aagaataaaa tactttaacc tgataagctg 780
catgtcaaaa aaaaaaaaaa aagactagag tcaacagaaa ttttgaaagc tttttttttt 840
ttaaagatca agaacaaagc aggtattccc actattccca cttctattca gcattttatt 900
gcaggtccta gctagcggag aaaaaaagag aaaggaagaa aaaagataat cagtcgataa 960
aagatgagaa ttaataagag aattcagcaa agtggctgga taaaataaaa atcaatatac 1020
caaagccagc catattttcta catttcagca agaatacagca aatgcaattc tgaaaaatat 1080

```

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atcatgaagt gacatcagtg aaactaccta ggaataaatc taaaaaaggt tttgcagaag 1140
ctcttttgtagg agatacttaa aaaaccagtt tgaaagagaa atgtaggcag ggcgcagtg 1200
ctcacatctg taatcccagc actttgggag gccgaggcgg gcggatcatg aggtcaggag 1260
atcgagacca tcctggctaa cacggtgaaa ccccggtctct actaaaaata cagaaaatta 1320
gccgggagcag gtggcggggcg cctgtagtcc cagctactcg ggaggctgag gcaggagaat 1380
ggcgtgaacc ccagggggcg gagcctgcag tgagccgaga ttgcgccact gcactccagc 1440
ctgggagcaga gcgagactcc gtctcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1500
aattggctgg gtgtggtggc gggcacctgt atttccagct actcaggagg ctaaggcagg 1560
agaattgttt gaacctggga ggaagaggtt gcagtgagtt gagattgtgc cattgcactc 1620
cagcccgggt tacagtgtga gattctgaaa gaagaaaaga aaagaaagaa gagggagaag 1680
gaaggaagga aggaaggaag gagagaacga aagaaagaaa taaaagaaa gaaagaaaga 1740
aagaaagaaa aagaaagaaa gaaagagaaa gaaagaaaga aagaaagaaa gaaagaaaga 1800
aagaaagaaa gaaagaaaga aagaaagaaa gaaaatgtat catgttcttg aacaggaaga 1860
caacattgtg aaggggttaa tttttccaa attggtctat tctgggtcaa tgcaattcta 1920
acaaaaatcc caatagggtt tgttgttgct gttttgtttt ggtgtaactt gataagctga 1980
ttggaaaata catatggagc aggcacggtg gctcacacct gtaatcccag ccatttgaga 2040
ggctgaggcg ggtggatcac ttgaggtcag gagtttgaga ccaacctgaa caacatggcg 2100
aaaccctgtc tctactaaga acacaaaaat tagccgggag cggtggtgca aacctgtaat 2160
cccagctact caggaggctg aggcattgaga attgcttgaa c 2201

```

```

<210> 50
<211> 2434
<212> DNA
<213> Homo sapiens

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```

<220>
<221> miscfeature
<222> (434)..(434)
<223> SNP216=C/T

```

```

<400> 50
agaagggtat tggaaggtgg agaagaatag aggaagaggc tggaatgga ggcttggcag 60
ggagcccttg actatctggg aaggagctga aaatggatct gaagttagca caaatgacac 120
aagaaaaaat aaaaactcga agagtctgt aaccttgaaa gagattgaac cagaagttgc 180
aaatcctttc ataaagaaaa catgaggccc agatggcttt ctgagcaggg tcaagccatc 240
gcagaaggaa cacataattc taaccgaac aatgtcttct ggagaaaaag agagaacact 300

```


ccccagcttc ttgggagact ggcaagagct tgactccggt tggaaaagaa tggcctcaga	360
aaggaaaatt acagacaaat ctactcatg accttggatg caaaaatcct aaacacaata	420
ttagcaaattg gaayttggca acatattaaa aagattacta catcatgaca agtcgggttt	480
atcttaggaa gctaagactg atctaacaga aacatcaatt aatacaattc attagcaaag	540
aaaagccatg taatttttgc aagtgatata aaaaaggact tgaggaaatt aattatccgc	600
ttgcaattaa ataaaaatct cttgcacact aggaaaagaa taaaatactt taacctgata	660
agctgcatgt caaaaaaaaa aaaaaaagac tagagtcaac agaaattttg aaagcttttt	720
tttttttaaa gatcaagaac aaagcaggta ttcccactat tcccacttct attcagcatt	780
ttattgcagg tcctagctag cggagaaaaa aagagaaagg aagaaaaaag ataatcagtc	840
gataaaagat gagaattaat aagagaattc agcaaagtgg ctggataaaa taaaaatcaa	900
tataccaaag ccagccatat ttctacattt cagcaagaat cagcaaatgc aattctgaaa	960
aatatatcat gaagtgcacat cagtgaact acctaggaat aaatctaaaa aaggttttgc	1020
agaagctctt tgtggagata cttaaaaaac cagtttgaaa gagaaatgta ggcagggcgc	1080
agtggctcac atctgtaatc ccagcacttt gggaggccga ggcgggcgga tcatgaggtc	1140
aggagatcga gaccatcctg gctaacacgg tgaaaccccg tctctactaa aaatacagaa	1200
aattagccgg gcgaggtggc gggcgctgt agtcccagct actcgggagg ctgaggcagg	1260
agaatggcgt gaaccccagg gggcgagacc tgcagtgagc cgagattgag ccactgcact	1320
ccagcctggg cgacagcgag actccgtctc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa	1380
aaaaaaattg gctgggtgtg gtggcgggca cctgtatttc cagctactca ggaggctaag	1440
gcaggagaat tgtttgaacc tgggaggaag aggttgcagt gagttgagat tgtgccattg	1500
cactccagcc cgggttacag tgtgagattc tgaaagaaga aaagaaaaga aagaagagg	1560
agaaggaagg aaggaaggaa ggaaggagag aacgaaagaa agaaataaaa agaaagaaag	1620
aaagaaagaa agaaaaagaa agaaagaaag agaaagaaag aaagaaagaa agaaagaaag	1680
aaagaaagaa agaaagaaag aaagaaagaa agaaagaaaa tgtatcatgt tcttgaacag	1740
gaagacaaca ttgtgaaggg gttaattttt cccaaattgg tctattctgg gtcaatgcaa	1800
ttctaacc aaatccaata gggtttgttg ttgctgtttt gttttggtgt aacttgataa	1860
gctgattgga aaatacatat ggagcaggca cgggtggctca cacctgtaat cccagccatt	1920
tgagaggctg aggcgggtgg atcacttgag gtcaggagtt tgagaccaac ctgaacaaca	1980
tggcgaaacc ctgtctctac taagaacaca aaaattagcc gggcgcggtg gtgcaaacct	2040
gtaatcccag ctactcagga ggctgaggca tgagaattgc ttgaacctgg gaggcggagg	2100
tgtcagttag ccgagattgc gccactgcac tccagcctgg gtgacagagc aggactctgt	2160

```

ctcaaaaaaa aaaaaaaaaa aagaaaagaa aaagaaaaag aaaaaaagaa gaaaaagaaa 2220
gaaaatgcat atggaaatgt aaagagccaa cgattgctca aataatcctg aagagataaa 2280
aggtgggtgg gttgggggtg aaggggagaa atattcagag gtaatgaagg tggtgctcag 2340
atagacaaat ggaccaacgg acagccacac cacagacctg catccatgtg gaagtttggt 2400
ttatgacgcc tccagcacgg aagatcttgg agaa 2434

```

```

<210> 51
<211> 401
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (201)..(201)
<223> SNP217=G/T

```

```

<400> 51
accattttct tgatgttttc ctctggaac cagagcaaag aaaacccgag gaaactgcac 60
ggcaacaggc cccaggacgg caggtgggct ggcagcaaga ccactttctt atctagagct 120
ggatttaggg gcctgaagcc agcgaggaag gaggaaggag gaagcacaaa tttaaagac 180
ccttctagaa caacctatta ktcccccccc tccttggggg aaaaagatgg catgaagtac 240
cctcagttaa gaatcctggg gaaagataac catccgaggg tcgggctccc cagacagacg 300
acagcagatc ggggctgctt catgagtgtc ctgctgccag gaagtgtgca tggcaggggg 360
gcagctggaa ggtcatccag agccacccca ataccagcaa a 401

```

```

<210> 52
<211> 401
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (201)..(201)
<223> SNP218=A/G

```

```

<400> 52
ggtgggctgg cagcaagacc actttcttat ctagagctgg atttaggggc ctgaagccag 60
cgaggaagga ggaaggagga agcacaaatt taaatgaccc ttctagaaca acctattatt 120
cccccccctc cttggggtaa aaagatggca tgaagtaccc tcagttaaga atcctgggga 180
aagataacca tccgagggtc rggtcccca gacagacgac agcagatcgg ggctgcttca 240
tgagtgtctc gctgccagga agtgtgcatg gcaggggggc agctggaagg tcatccagag 300

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ccaccccaat accagcaaag acccactca aaaatcagcc caacccatgt ctggaaatca 360
gctcttcttg ctccattgcc catccttccc ccaccttttc c 401

<210> 53
<211> 623
<212> DNA
<213> Homo sapiens

<220>
<221> miscfeature
<222> (434)..(434)
<223> SNP219=C/T

<400> 53
tggtcacctc tgaccttcca cggaggctgg gctcagagtt cagcctggaa accagttcat 60
ctgttaaaat tcccctagga cctagggtag gtgacctggg caatctgcag taccagacc 120
ccggagccac attcttccca gacctgaaaa ggcacatatt gctgttggtg cccggggagg 180
aaggcggatg tttccaggaa ggccgcccc gtctgagggg ccacagaaga gggctgaggc 240
ctcagatccg agtgtggatt ttggacttcc actgaccccg gctatgtgga ggggccaagt 300
gggtgggcac cccttgctgg cctgcccctc caggcacctg tctaggagct gcagacacag 360
acgacatgac tgggaactca ggtcccagag ctcctccttc tccagggtg tgacagagatt 420
taagggcttt gcaytgaagg atgaaaacag ccgaagaaca ggggtgctca gagacatcac 480
ctagcgcacc tcccttccgt atcttctgc tgcggtttga cccagtaaca ggaatcagga 540
ctgcagaagc gcctgaggcc caaggagcag acggtccatt ccattctgca cctgggcagc 600
tcctaacccc aagccaggac cta 623

<210> 54
<211> 601
<212> DNA
<213> Homo sapiens

<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP220=C/T

<400> 54
tccgtggaag gtcagaggtg accagctggc agattctaag aacctggcca ctttccggct 60
cctctctccc tatgtgectg cccacacccc agctcccaa ccaagtacat gcttgccag 120
gtcttcccg aagtcagagg tgaccaactg ggtcctggtc accatcacac ccactccct 180
gccctcaggt gccattctg tgcccagcac ctgcacgcac aactggctc tagggcctgt 240
ttgccagcat ttactocctg ggcccacggg tccagggact tcttgaaaa tgctgtggc 300

```

ygtcagcaaa cagagcagat cagcttgga gaagggatgg cctccctgta taccctggc 360
ttgtccaagg agaacaaggg caactcccaa ctccccgcac cacagggccc ccaggacacg 420
ccaccatcct gtgagcaggc agcggccagc tctgctctgt gttgaagcag cagcaccgcc 480
taatgccagc ctggctggcc agttccgaga gttgggggta agcgggagag gccccatgtg 540
gtggccagaa agagaccact gagtattctg tctcttgac aacatatagc cccctttca 600
g 601

```

```

<210> 55
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP221=C/T

```

```

<400> 55
gaattattgc ctggttttat gagtctaag ttgtgacctg ctctgccac tgatgccaag 60
gccaggaggt ctgtcagtca ggggtggcaca tgacacgcct gtgccccgg ccagtcccac 120
tgtccctgat ctgagcttct cccatgcaaa ctcagaagct agaaacaggc tgctggcctt 180
tgtttcttct tccctgaatc caaggatgat ggtttttcaa gcaggctaca tttgtaaagt 240
aatcctcgac tctccgtttt atattaatga aagccagcca gagctgctga tcggctccag 300
yggatgggac aggcccgag aattccgtgg ggcagccggc acaatgccag ccagagcac 360
agaacacggc atggggctgg cgtgcaggaa aaccaggcac ccctgccggc ccctctgggc 420
tttctgcatc ttttaagcag ctctcagagc ccacagactc cattccaggg cctgtgggga 480
tccacaggac tcatgccaag aatgacggaa atctttctga gctcaaaact ctctgaattt 540
gaaaaacaaa tggtcctttg aagaacactg cttccatatg gaactatggg gcacggtgat 600
c 601

```

```

<210> 56
<211> 2186
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (201)..(201)
<223> SNP222=C/T

```

```

<400> 56

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gaacttcac	cctgaagtat	gcatactgta	caggcaaggt	taaacgaaac	tccacgaaga	60
aaaatgcaaa	acgctcaacg	ctccagaagc	ccccagcggc	ccccggcagc	caccttcctc	120
cctgcagagg	caccoggggt	ctgcgcgtgc	aattcccgcg	ctctatctag	cactcactgt	180
cacctgtctca	cttccttaaa	yaatacatgg	attccctttg	ccttttttca	aatttttacag	240
atatcatttt	ggcctttttt	tctttggaac	tttccatacg	caatatcaga	ctctatgtat	300
tcctctgtgg	cctccacggt	cccctccaca	gcagtgtctga	gattcacgcg	ccttgatgaa	360
tgcagttggc	attcattcat	tctcccacca	ggcactgtga	ctccacgtgt	gagcaactca	420
cggcatccgg	atccttttct	gttcacaggc	acttgcacga	tttccagcgt	cttgctgtta	480
tgaacagagg	tgcttggaag	cttctcgtgt	gtgtctcctg	gccacgtgg	gagaatgtgt	540
caggggtgtg	tgccatggag	tcacatgctg	gtttgcacag	caggtgtgtc	tttcatatta	600
gtgggcaatg	actactgttt	tctaaagagg	ttgcaagatt	tgggactttt	tttcatgttt	660
ttcttttttc	tttttttttg	agatggagtc	ttgctctgtc	gccaggtctg	gagtacagtg	720
gtgcgatctt	ggctcactgc	cagctccgcc	tcccagggtc	atgccattct	cctgcctccg	780
cctcccaagt	aggtgggact	acaggcgccc	gttgccatgt	ccagctaatt	ttttgtattt	840
ttagtagaga	cagggtttca	ccgtgttagc	taggatggtc	tcgatctcct	gacctcgtga	900
tccgcccacc	tcggcctccc	aaagtgtgtg	gattacaggc	atgagccgcc	gcaccgggcc	960
atgtttttct	tttttttaaa	acaaagtgtg	gaaactcaaa	aggctctgga	agacctggcc	1020
atgtgcagca	gtgttatgag	ttaaactgtg	tccccaaaa	agaggtgtgg	aagtcctcac	1080
cccaggatct	caggaggtga	ccttatttgg	aaggagggtc	attacagatg	taattaagat	1140
atcaattaat	gtgaggtcat	aggggagtag	ggtgggccct	acatccaatg	actgctgtcc	1200
ttgtaagaag	aggggaactt	gttttttttt	ttttttcttt	gagatggagt	ctcacactgt	1260
caccaggtct	ggagtgtagt	ggcacaatct	cagctcactg	caacctcggc	ctccgggttt	1320
caagcaattc	tctgcctca	gcctcccaag	tagctgggat	tacaggcacg	caccaccatg	1380
cccagctaatt	ttttgcattt	ttagtagaga	cagggcttta	ctatgttggc	caagctagtc	1440
tccaactcct	gacctcaaat	tatctgccc	cttctgcctc	ccaaagtgt	gggatcacag	1500
gcatgagcca	ttgcgccc	ccagaagagg	ggaatttgga	cacagacaca	caggagagccc	1560
accatgtgac	aataaaggcc	gagactggag	ccaggcagcg	caagccaggg	aaggccaagg	1620
agtgtcagca	ccaccagaag	ctggaagagg	ccaggaaggg	cctcctggag	cctctggagg	1680
gagcgtgcc	ctgctgacac	cctgaccttt	gtcttccagc	atccaatgac	acagtaaaag	1740
tttgctgttt	taagccagac	agtctgtggg	ttttgttttt	ttttttgaga	cagagtctcc	1800
ctttgttatt	ggggctggag	tgcagtggcg	tgatctcagc	tactgtaac	ctccgcctcc	1860

```

caggttctaa gagattctcc tgcctcagcc tccagagtag ctgggattgc aggcgtgccc 1920
caacatgcct ggctaatttt gcatttttta agtagagatg gtgtttcacc atatgggcta 1980
ggctgggtctc caactcctga cctcaggtga tccacctgcc ttggcctccc aaaatgctgg 2040
gactgcaggc atgagccacc atgtccagcc caacctgtgg tttcttagca gccctaagaa 2100
ataagtacaa gcagcattcc aggcccttcc ttcattccat cctccagtct ttgtctcagt 2160
gaccaaatag gccttgggtc tgttgc 2186

```

```

<210> 57
<211> 2075
<212> DNA
<213> Homo sapiens

```

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<220>
<221> miscfeature
<222> (1875)..(1875)
<223> SNP223=A/G

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<400> 57
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actctatgta ttctctgtg gcctccacgt tcccctccac agcatgtctg agattcacgc 120
gccttgatga atgcagttgg cattcattca ttctccacc agcgcaactgt actccacgtg 180
tgagcaactc acggcatccg gatcctttct tgttcacagg cacttgcac atttccagcg 240
tcttgctgtt atgaacagag gtgcttggaa acttctctgt tgtgtctcct ggcccacgtg 300
ggagaatgtg tcaggggtgt gtgccatgga gtcacatgct ggtttgaca gcaggtgtgt 360
ctttcatatt agtgggcaat gactactgtt ttctaaagag gttgcaagat ttgggacttt 420
ttttcatgtt tttctttttt cttttttttt gagatggagt cttgctctgt cgcccaggct 480
ggagtacagt ggtgcgatct tggctcactg ccagctccgc ctcccagggt catgccattc 540
tctgcctcc gcctcccaag taggtgggac tacaggcgcc cgttgccatg tccagctaata 600
tttttgtatt tttagtagag acagggtttc accgtgttag ctaggatggc ctcgatctcc 660
tgacctcgtg atccgcccac ctgggcctcc caaagtgtg ggattacagg catgagccgc 720
cgcacccggc catgtttttt tttttttaa aacaaagtgt agaaactcaa aaggctctgg 780
aagacctggc catgtgcagc agtggtatga gttaactgt gtcccccaa aagaggtgtg 840
gaagtctca cccaggatc tcaggaggtg accttatttg gaaggagggg cattacagat 900
gtaattaaga tatcaattaa tgtgaggtca taggggagta ggggtggccc tacatccaat 960
gactgctgtc cttgtaagaa gaggggaact tgtttttttt ttttttctt tgagatggag 1020
tctcactg tcaccaggc tggagtgtag tggcacaatc tcagctcact gcaacctcgg 1080

```

```

cctcccgggt tcaagcaatt ctctgcctc agcctcccaa gtagctggga ttacaggcac 1140
gcaccacat gccagctaa tttttgcatt tttagtagag acagggcttt actatgttgg 1200
ccaagctagt ctccaactcc tgacctcaaa ttatctgccc acttctgcct cccaaagtgc 1260
tgggatcaca ggcatgagcc attgcgcca accagaagag gggaatttgg acacagacac 1320
acagggagcc caccatgtga caataaaggc cgagactgga gccaggcagc gcaagccagg 1380
gaaggccaag gagtgtcagc accaccagaa gctggaagag gccaggaagg gcctcctgga 1440
gcctctggag ggagcgctgc cctgctgaca ccctgacctt tgtcttccag catccaatga 1500
cacagtaaaa gtttgctggt ttaagccaga cagtctgtgg gttttgtttt tttttttgag 1560
acagagtctc cttttgttat tggggctgga gtgcagtggc gtgatctcag ctactgtaa 1620
cctccgcctc ccaggttcta agagattctc ctgcctcagc ctccagagta gctgggattg 1680
caggcgctgc ccaacatgcc tggctaattt tgcatttttt aagtagagat ggtgtttcac 1740
catatgggct aggctggtct ccaactcctg acctcaggtg atccacctgc cttggcctcc 1800
caaatgctg ggactgcagg catgagccac catgtccagc ccaacctgtg gtttcttagc 1860
agccctaaga aatargtaca agcagcattc caggcccttc cttcatcca tcctccagtc 1920
tttgtctcag tgaccaaata ggcttgggt ctgttgctgt gagagcaagg atgaccaagc 1980
ccttctgcag atctccaaga gtctgtgtgc tcctctgagc ctggggtgag cctctgagcc 2040
cttctcaaca cagggtgca ggctcccct ccca 2075

```

```

<210> 58
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> miscfeature
<222> (301)..(301)
<223> SNP226=A/G

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<400> 58
atgcagccag atgcaccccg aaggctgcgc cccacagca cccttgatga ggacacggcc 60
catggcaggt gcttgggaaa tatgggtgga ctggctggaa ggaaggaagg aaggagagag 120
gggactggaa attcttccca gctccttcat ttccagatg gaaggtgggt ttcatcaaat 180
gggaggtctg atacagtagc ccagccacc cgcggtgct taagtttcaa ttaattgata 240
ttaaatacgt aaaactaaga attagtcct cagccacact ggctgcattt tgagtgtca 300
rtagctgtgt gtggccagtg gtgcatatc gagcacatgg gacatttcca gaaagttcta 360
ccagacagag ttgctttaga ccaaggaagg agagagaatt cagggtgtgc agcattatga 420

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```

agggtcccagg gcatctcttc cagcctatgg cccctcccag gccagggcag ggtgtggaca 480
gcaacagaga cccactggg gagctggggt ataggatggg tcacaactca gggctaaggg 540
tgcgcccaga gctgccacca agaactggag ccatgggagg cagggcacct tcgtccctgt 600
g 601

```

```

<210> 59
<211> 934
<212> DNA
<213> Homo sapiens

```

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<220>
<221> miscfeature
<222> (466)..(466)
<223> SNP231=C/T

```

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<400> 59
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tgtctttctt gctcaoctac aagagaaagc acccagcaca tggcaggagc tcaacctca 840
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<210> 60
<211> 601
<212> DNA
<213> Homo sapiens

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<220>
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 <222> (301)..(301)
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<210> 61
 <211> 401
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (201)..(201)
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<220>
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 <223> SNP237=C/T

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 gagacagggc ctcactgtgt tgcccatgat ggtcttaaac tcctggcctc aagggatgct 360
 cccttctcag cctccaaggt gctgggatta tagacgtgag ccaccacacc ctgctccatc 420
 tgagaatttt ctagccaca cttgtaactg tgcaaagatc ttgccccaaag actgtaatgg 480
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 yggcgctggt ttggggaagc tgggggtcca ccgggggtgct cagcttccaa ggccggcatt 360
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c 601

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