



TNFRSF11A (NC_000018.9, GRCh37) - gDNA - 2024-10-10

tcaagatatc ccagcttggt agaccaaacc aatgtgcaac ctccgtgtat 59991592
tatgattttg cctgtaactt ctgctttctt gaaattaacc ctgctgttaa 59991642
aaatccttac ttgcaagcca actgaaggtc aggatttaag caagagctgc 59991692
cccattctcc ttgcctggag ctctgcagat aagcgccctc ttttctccca 59991742
gtgcaaacct tagtgcggat ggcttggcct tactgcacca gaagaacgga 59991792
cctcagtttt taggtaacac tgtgccccag acatctggcc actttatgtc 59991842
tgaaagggcc aatgtggtga tgggggctgg gggacgcctc aaggctggcg 59991892
gagcctgggt cctttctaga atttggggg tgcaggacgg gtgaggggcg 59991942
gaggcagagg atcaggagaa gaaaaagaga tagtggctgc tggccccaac 59991992
atthtgaagc aaagaacaag aggagtattt tacgaagatt ggcggatggt 59992042
gtattgtggt gatgccttaa ctgcagtcga cgaaatctcc aggaaggatc 59992092
ctcctcccgt tcattctoga cggtaggcga tccactttcg gaaggccggg 59992142
cctcgaaggg tgggcgcgcg gggcaggagc aggaccacc cgatgcccc 59992192
attccttccc gggaggcggg gccacaggc ctgggggtcg gcaaggcagg 59992242
agccagtgcc gtgaagggca acccagggt ggtctcccgc caacctgtct 59992292
gcagcccag cacctgggcc aggggcggag accggaccaa ggaggcaccg 59992342
ggcgcggcga acacccccg ggcccctccc cgagcggggc cccgcgtccc 59992392
accgcaaacc aggggagctt gggcaccacc tggctggcac cgccgggccc 59992442
ggccggaggg gggcgcagga gggcggcgcg ggggcaggtg cggggcgggg 59992492
cacgggggcg ggaccacaca gggccgcggc agccgcgccc gctgggcca 59992542 **c.-45A>G**
AGAGGCCGCT GAGGCCGCGG CGCCCGCCAG CCTGTCCCGC GCCATGGCCC 59992592
CGCGCGCCG GCGGCGCCG CCGCTGTTG CGCTGCTGCT GCTCTGCGG 59992642 **A5V**

CTGCTCGCCC GGCTGCAGgt aaggagcgcc cgcgcctgcc gggccgcgcg 59992692 Q25L
gcccgcacgcc tcctcgggag ccccgggaag ggccggggcc ggcggcatcc 59992742
tggctcctcc gccttccgag aggagccgga gttttgggga gcggaggccg 59992792
tggaagctg gggaggcgct tccagagttg gacggcggag ggcgggaaag 59992842
ggcaagcggg gggaaactgg ggcgcagaag gagcaggttg gcgggaccgc 59992892
aacacccgaa acgggctctt ccaaaagccc ctcttagccg caggctttga 59992942
tgctgtcatt ttctccaaat gcttcttgag cacctactaa gcgcttgccg 59992992
cgggcggtgc cgcgggagac agcgcctggg gcacctcact tgcggcagat 59993042
aaccgttccc gatacgattt ctcccgggtg gcctccgtcc caaatttcca 59993092
cccggaaaga gacatgattc cctccgtccc tgaactgcgg gcttgccctt 59993142
gcctcccctg agccccttcg gggacacccc tgccagctcg cctggaggcc 59993192
ccgcacggcg gggagagact gcgcgcgccc cccggggatg ctggacttga 59993242
ccctcgcaga cccgagtggc ttcccgtcc tctcgaaca ggtttctcag 59993292
tacagttagc aagcgaatgc agccaggcac ggactttctg cctcgtggag 59993342
gagggccgca gaggaagca caccagcac aacaaacgct ttaaaaatcg 59993392
ttgatacgaa cttgaaagct ctcacagga agggcgagtg gtggttttct 59993442
tggtttcggc tgggtcagat ttcccctctg ttaacactag gttaggctgc 59993492
tgccgtccct ccgcagccgg gcacggaacc cggagaggcg tggggaggga 59993542
cgcatggaga atcgtgtttg ggtgagaaga gaggggaaaa gccttgacag 59993592
aaataatgtg ggtgcactga aggctgaagc aaaagattct agggaagatt 59993642
cattcccaat tgtatgggtc tgtcagtatg gttgaggaa acgaaggcgg 59993692
aaaagtctaa aggatttttt cattttaagc acttcaggtg ttgcttaatt 59993742
aagtgttcaa caggttgaac ggggtgctac cttatttgaa ccaaaggacc 59993792
agggtttcag cgaacagcta gccacctaag aaaaacctgc ctgaccacgc 59993842
agttgcaaaa ttatctctca ctgctgtcgc aaaatgacat attcatatgt 59993892
gcataaaagg cgttcggttc taatatgaac acaaatgct atcaaaataa 59993942
gtttattttt caggagacc tttcaacaaa tgctgtttcc cgtctttttg 59993992
cctttaagcc cctttcatta tgcatgttta aaaatgaaa cttttgcatt 59994042

ggtcatttcc aattctaggg gagcgaacct tctaggaacc ttatgaattc 59994092
cttggctggg ccacgaattc aattgatata agacagacta acaggagaaa 59994142
aactgtactt aattacatac ataggcacag gactcctaca aaataagaga 59994192
cttgaggaag ggtcagatga ttgaagctca ttatagcatc cataggggct 59994242
tctgcagggg gctgcaaaac agatthttggg gctgggtttgg ggaggaagca 59994292
tatggtgagt aaaggacatc ttgtcaggca cataaaagat tctcaggcaa 59994342
taaaaatggg ctctgaccag cccttcggag aataggtgag agcctgtgtg 59994392
ggctgggtgc aacctcctgt ctctctcct gtaatcggag ttaatcttct 59994442
ctgggtgaga atcttctctg ggtgagaaga ttcccacggc ggagatttga 59994492
gacatttgag ttcgttttgg aggatctttc tttgggcaga gttcagagaa 59994542
acctctgccc gtggccacta ccacctgccc tgagttcaaa ataatcagca 59994592
caccatagtg gcatatthttg gggtggcatt tcctgaactc tttcacaatc 59994642
aagtgcatt ggaatgcttt tctgcttatt ttacttgggtg cccaaccttc 59994692
ccagtagaaa tgcattttct ctcaaagggt agactagatg cagccttaa 59994742
ataatatttc ctagagatac tgtggttatc taggaaaaag ctctctctgt 59994792
attcaatgac tgcttgthttg gccagcctat tccattagct caaaatthtag 59994842
gaatggcatt gacagttcat tgaagatgth aatgatcaaa caccaggcaa 59994892
gacttcagga actgcctagt gggtaaattg gthtttgcaaa atagthggca 59994942
taaathggctt ccagaaagtg cthtatctgt agggatcgtat thtagthtca 59994992
ththttattat atthaaatagg thcaaactta cctgaaaggc tataagthttt 59995042
gccctthtaa acattthctat gattatatct ctgcctgctt gtattthtga 59995092
gggaattcat thtcagatag aataaaacta thtgcctaca gataaaaca 59995142
ththtgaattt thtatgtagct agtcctgctg thtattccag gtaacaaaat 59995192
atagatgcac actgthtttca thtaaggthaat ggattgtaca cggthcatgth 59995242
tatctggggt tataagatgc aagagcaggt gctgtgcatc gcaggacaac 59995292
agacattggg ggtgtcaaac actgtgctaa tgaggaataa ggggaaggcg 59995342
catgggtcac agthctagthg agagcgcag atgggaaaag ctgtgatgat 59995392
aagagagcag caaatgataa gaaaagtaca gaggtggca gaggaaggga 59995442

gagagggagg aggggagggg gagagggagg gaggaccgct ggaggaatcc 59995492
ctaaggactt cgggatgaag gggtttccca agtggctctg gaaagatgtg 59995542
tgggaaacca gaggtcaggg aagaaatgat tctaggaggt gggaagaaag 59995592
ctccctatgt tgggaggatg gtgtgaatgc tttagacctt aaagaatctt 59995642
acagaaagaa agaaaaaaaa aaacaacccat atatttttat gaccttgacg 59995692
atagcacaaa tcaccttaatt caggaaaccc ccaccaaaca aattgggcat 59995742
tgaactttta tagttttgag gtaactcttg gatggccctt actgaggtgg 59995792
taaagtgcac taatcagaag caggccacag ggccctggag cgcccatggg 59995842
gagaccctc cgaagaaatc ccccaggggtg tgactctggg tcataggggtg 59995892
ggtaggggtgct ctgtgccacc tttcctcctg ccccccattc catccgagag 59995942
gggagacatg gatatatgca gtcatgcctt gtttggggag cacagacaca 59995992
gatctgtggg cttacagttc attttgctga gaaatatttc aaatgcctcc 59996042
cctgttattt cctttctacc acttccccct aaaatggcaa acctgtaata 59996092
ggaacatact ccctgtgttg ataagaaat agcttgcttt ttcagttatc 59996142
taccagaact tcttacatca ggaaaactga aacaataaaa atgtgccttt 59996192
ggaggtcaat aatcagtggt tttatgagga catgaaaagg ggagttccaa 59996242
agcagggcct cctctgcaaa gagtggtgtt ttaagaaggg gtagtgtgga 59996292
cttcatctgc catgtcaata ttaaaatttc cccattgta ttttcctatt 59996342
tttgaagtcc atggaaaaaa aaatagtggt tttcccacat gctgtatcca 59996392
gtggtctcta ggaatgttgt ctaggcatt ttttggttg tttttgttt 59996442
ttttggctga tgtgagtctg cagcccatcc tgatggtacg caactgtcca 59996492
ggtaggtcac tccctagggc atctgcccc tggccaggtg gcccatggcc 59996542
tgactgctgt ctctcacag catcctggcc ttagtccaca gggaagcaca 59996592
cctgcctctg agcacacagg ctgctgactc cagctcagtg cccccagga 59996642
ctggcatggg taggattctg cccagcaggt gatttttctt ctgagtacct 59996692
tttcattctc tgcccggatt gtgggacggc ctttctgtgt atttccctct 59996742
agttgcagtg tggggctttc tatggtgtcc actgctggaa acacagtta 59996792
agttcagctc accctttgtg ccccaaacg ctaagcttga aagaaccaag 59996842

aaggagccgt gggtttcagc aaaatagcct tgatccctct gaagttctta 59996892
gtgaactttt gaggtttaa accgagtggt tgtggagcaa gattacgcac 59996942
agccccatat ctctgtcctg attctgagag aactcttatt tcctgcctgc 59996992
gagaccaacc tggcagcgct cccagggcag gctgcctgtc tgcctgggtc 59997042
accagaagct ccttgtcaga gggctgactg gtgctgctgt tctcactgtg 59997092
tcacgttcca gtcgcagtgt gctctcacgc caagaagccc aaagcagccc 59997142
cagtcagcag tgggaagtac attctttagg gccgtgtgat gatgacttta 59997192
tatgtgtgtt tgttttgtga gccaccgtcg actttcagcc tttgagtgtc 59997242
ttgggtcact gcttgcaggc cacagcattc gataatgaga aaataaacct 59997292
gaatttgtgt tcaatgcatt cagtgactgc aacaaatgga gtaccacaaa 59997342
cctgtagcac actctgcagt ggactgagga aacagagacc aagggccaca 59997392
gctcctgtct tcaggagatt ggcagtccag gtgtgtgcag atgattaata 59997442
gacagcagga tccggtgttc tggggagggg tttcaacttg tcgtgggcac 59997492
acaggataag gagtgccttc acctgaaagt gtcagagagg acttcccatc 59997542
cttcctgtgt ggtcacatgt gtctaaagct ctgcagaccg catgagagaa 59997592
cagctcttag gctgggggtt ccagaatgac cagtgccttg tctggcgggtg 59997642
agaacagcag ggactcgcac cagagtggag tgtttgcagg gaaccgaagg 59997692
aaggacagga ttcttgact caggggtgtg gggagagagg aaggcaaaaag 59997742
ccagcactca aaggctttag gtacaagcaa atagttcaga ttaatatattg 59997792
agctgtgagc tggagagggc catgatcagt tttgtgtatt aggggaagag 59997842
tgtccagggg cgggccggag gggccagta aggagcctac tgccttggtt 59997892
tggaagagg cctgaatcag gtcagggcag tggcgagaga aggagaatct 59997942
gagtacaggg gcgatttcag agccagtggt gctgtgcagg ggcagaaggt 59997992
gcaggggcaa aggacggatg tggctgggta ttagaaaaaa aaagacatgg 59998042
caggcaggtc tgagtgcaat ggtgtttaca accaattaat cacaaccagt 59998092
taacagattt atttgttcct tctccactcc cactgcttca cttaactagt 59998142
aaaaaaataa aataaggccg ggtgtggtgg ctcacgcctg caatcccagc 59998192
actttgggag gccaaaggtg cagatcatga ggtcaggagt ttgagaccag 59998242

cccgaccaac atggtgaaac cccgtctcta ctaaaaataa aaaaattagc 59998292
ccggcgtgag ggtacatgcc tgtaatccca gctgctcggg aggctgaggc 59998342
aggagaatcg cttgtatcca ggaggtggag gttacagtga accgagtggc 59998392
accactgcac tccagcctgg gtgacagagc gagactccat cccaaagtaa 59998442
ataaataaat aaatagtaaa taaataaata aataaataag acacggcagc 59998492
tgtcaggaca aaaaagctgg ctgtttgggt tatatttttc actttattaa 59998542
ggaaattgct gtcttagtcc aaatcaaaat gttgttctgg ttcaagtga 59998592
gaagtgttgt tgtttttccc aaacaaaaaa gaaggattac gtttaggctc 59998642
ttgaatctcc ctttttttgg gttctcttat tgggaggcag agacaaagtt 59998692
cattagacc ctttagaggca aacatggtaa aagccccgtg gcattgtgct 59998742
gtgcagggaa cttgcaggct ctgacatcta gagagccatt gccagaccta 59998792
gagatgtcct ggaatgagaa gttcagcgtg gagacagagc tcttaacaca 59998842
cactgaagag agataaacag ccagtgatcc ccagagagtc acatcagagc 59998892
agaggcaggt gtgacctgac ctgtggtcct cccacactgg cctcaaatat 59998942
gtcacctaac cccaaaagaa gcagtgttta tgttgacca agagctgcgc 59998992
aaaaactggt tgcttgcag atacacattt tcctggcaca tggccgctgc 59999042
ctaagatgag cgtttccctt cctctgtgtc cagtgcctct tagacttccc 59999092
cataccccc aaaaatcctg acccagcagg tgacacggag gcccgctctg 59999142
caccagcaaa gggacagagc tgccagattt ccaagtatca ggaagacctg 59999192
actgtaaaaa ccaccctttt agttcatcaa agtaataata acttattaca 59999242
tttcctggtg agagtgttga gagtacaaga gccacttcct caagctatca 59999292
gaaatttgaa gactttccat gaaaaatgag gaagaaaaac tctgtttagc 59999342
tcttggtgaa tgtgatggct aagctgggca atggggaaag attgtgtggc 59999392
attgccagaa atcctactgg caccactgtg ttggctgggt tggggttcgc 59999442
atcacatccc acagatggga aatggaccac ttccctaaag tattgacttt 59999492
ttaaaaaat gtattactta cctaagtcag ttagcaccta acttaatagt 59999542
gtatcacgta gtagcacaaa cagctggcaa gttcatagcc agtaaaagag 59999592
acgtttaaag gccctgtct tctctcaact tcatagtcag atatacaagc 59999642

aggatcacat ctaacacttt catggtaatt gagaatcaat tccattttta 59999692
aagcttagtc gagattattc acttctgccc ttgctaaccc gtttccttgt 59999742
tgaataattc ctaatatcag gaacttccct ctaacagacc taaatctaac 59999792
atgtcacaat ttgaccccat ttctctcaat ttgttcttta atggggtaaa 59999842
aaccagttgg tcaatgtctt ctttatttta atatttctat tgttgaagat 59999892
tgtagccca caacttcccc ttccccaggg ttattcattc cagttccttt 59999942
aacctctttg taaacttttt tttttctttt caattcaacg agatactttt 59999992
tttgatttta ctggcaaaaa agccaacaac cccaaaccaa acaaaacca 60000042
ccaagtattt tgggaacatc agactcagga cgttgctgcc tctgacttca 60000092
gagaggctga gatctgatgg ggaaggctgg atgtcccatt ctctgttccc 60000142
acggagcccc acaggaggaa cacatgagat gcctctagga cacaggcatg 60000192
ggaaggatga gttccgagtg gagaatcggg caggggggtgt ttgatctggt 60000242
cctggaagga tgggtgtgat tctgagagga aaagagagct ggaggagaa 60000292
gggagaggt ggtgacaggc atgagaaaat catgtccgc cctgatgtgt 60000342
ggagcccagg actgatgaca ggtaccgggg aaggataaag ccagctggga 60000392
aagtctgga ggcctggatc acaaagggct tgccaataaa cctccagaac 60000442
tgggactctg ccctgaagcc aggggttctc caactgtggg gtctgggccc 60000492
agcatcagtc tccccggga actcgtaga aatgcacctt cttatgcccc 60000542
ccacctaccg aatcagaaac tctgggggtg ggggcccagca gtctgtggct 60000592
tcacaacctc tccgctgatt ctgacacatg ctcaagttagt agaacagctg 60000642
ctagagaccc cgggattcca tgaaaaggtt tgcaactcagc tctgacaata 60000692
ttagaagatt aatatattac aagtaccggc catctgttga acccctcctg 60000742
tgtgccaggc atgtacttta cacggattat atctaagtct cactccacct 60000792
tgctagtaag ttgagaaaac tgaggcacag agagactgat taacttgcct 60000842
gagtttgac agctagttag tggcagagct ggagctccta ccaggcagcg 60000892
ctccagtac tgtggtcttc acccctcagg taaactgctt gtatagtcaa 60000942
ctctgtgatg gggtagggag tagagaaagg gacctccag aatggtggga 60000992
cagaaagctt tttggtattt ggggacaccc atgcaaatgc gtgcccagtc 60001042

tgcatTTgtg ggggtctgtc ttgtctgctc aagtatgtac tCactgaggg 60001092
ctttctagaa cttttttttt tttgagaagg agtctcactc tgtcgcctag 60001142
gctggaatgc ggtggtgccA tcttggctca ctgcaacctc cgcctcccc 60001192
attcaagcaa ttctccctgc ctCagcctcc cgagtagctg ggattacagg 60001242
tgctcgtcac catgccaggc taatttttTgt attttttagta gagacgggtt 60001292
ttcgacatgt tggccaggct ggtcttgaac tcttgacctc aagtgatctg 60001342
cccgcctcgg cctcccaaag tgctgggatt gcaggcatga gccaccgcgc 60001392
ctggcctcta gaactattct taagcagaaa tggcaatgct gtgtctttaa 60001442
ggctaatacca gataaaaggc actccaggca ctcttggcac agggTccatg 60001492
tgccagttga tccctgactc aggaggaaaa gaagtgtatg tcttgaatca 60001542
ccaccacttc ctgaagccaa ggcagcactg gctcgtctat gccccacacc 60001592
ccagagttag actataccgt accactgtgc tgtagccctg ggtgtaccgc 60001642
ctcagagggT cgcatctctc cacgcgtgtt catcccactc ccaccacctg 60001692
ccaggctctg tgtagggtgg gaggaggag aaggatggcc ttggagcccc 60001742
agggcagcag acagtgatag gttaaacctt tgcctcata agctttcggA 60001792
agtaggtagt tatattttta aaggtccttt atgtcttagt ctTactacaa 60001842
ttatagctaa tctggggact cttcccttga tgagaataac ctgggctcct 60001892
cttttgacat gtctctacca tggaaacaaat caaaatcatt ttctattact 60001942
aacttttttt gatcccttaa aagacacttt ctaagtagta agagaaaagt 60001992
tcaaataaga aagagggtca gaacacacat ggcctctggg tcacggtcag 60002042
tctcaagctt ttacttggag tgagatcagg agacactagc ggggtttagg 60002092
gggagaatga caacatggtg tCactaatgc acagtggcca gaaatctagc 60002142
agcagatccc caaaacctat gacaatggac tgtgagatca agggggcagt 60002192
taaattcagt gaaaacacag ctggaacctc tgtcttaaac cttaacctat 60002242
taacttctgt gggtcacaag gtttaaaaagt ggaaaattgc ccctttctaa 60002292
tgggctgaag tttctgtgct ccagttgggt ccagttggag gtccctgtga 60002342
ccaagccact ggggtcggaa tttttttttt ttttttgta cccaggctgg 60002392
agtgcagtgg cgcgatctca gctcactgaa cctcgcttct cgggttcaag 60002442

caattctcct gcctcagcct cccaagtagc tgggatgaca ggtacctaac 60002492
accacatttg gctaattttt tttgtatttt tagtagagac agggatttac 60002542
catattggcc agtttcgaac tcctcacctc aggtgatcca cctgccttgg 60002592
cctcccaaag tgctgggatc acaggcatga gccaccacgc ctggctctggg 60002642
atccaatttc catgtaaaat tgcaaaagac caagcaccag aaggcataac 60002692
cagtcatctt aactgtgtgg ggagtcctc atgggtaagg ggactcaagg 60002742
tggtgggcac ctgccctct gcacccaagg ggtgaggta cgcagaagag 60002792
gcctcatggg aggctctcca tttcctggca tgagtgcag gcacaaagag 60002842
gctgaaacag ctgtgtctcc tggtaggcag ccccggttcc agtccttatt 60002892
agaaaagaga gtttcagccc agaaagagat tgctaactctt gattttgcaa 60002942
ccctcttccc tcagggtatc tcggattttg tcccaaatca gtggagtctt 60002992
tccaagggcg tgcttgggag tgtgaatttg attcagtgcct agaaggaaac 60003042
tgttacagtc ttctgtatag ggaagttagg aggttacagt ggtctttgag 60003092
aaaaattatt tattaattta tcaagtattt gaatatttgc tacatgccta 60003142
gcactgttcc agtctcctta tcaccagcca tctcagcaag ttgattaatc 60003192
tctcttggga ggatgcagga aggggaagga agccaggcct ccaagcacag 60003242
tgcttggcac gtagtagata tttcactagg gcccaattctt cctatacccc 60003292
cattcatcaa tagataaata gataaaagggt gtccagggat gggagaggtg 60003342
gttctcaatg tctattgtac agtcagagat gactatgcag tgtttgaaa 60003392
taggagaaaag tcctggtttt tggttttcaa taaaatctct agcctgctcc 60003442
tcagagaccg gcattgacct tgcctgggag cttgttagga atgtagtctc 60003492
aggctctggt ccagaccag ggaatcagaa cctgcatttt aataaaaattt 60003542
tcagggtgatt ctgcgcacat tggagaagca ctggatttca ccctgaaggc 60003592
tgggcagtga aggaagggag ggcagcaggt aaggggaatg cttcctcctt 60003642
ccgtcacttt ggggactcct ggcctgagca gttcgtgcag ccccagcatg 60003692
gaggcagagc cttaggggac gtggcctcca gccgggggtg cactctcaga 60003742
agtgaccaca gggcttgttg gcttctacta cggaaaagaa gagaaagcag 60003792
ttcttatctg aaatgaatac aaagttaaag aaaaaaacia accccaagaa 60003842

tgacaatgta aaaaggcttt cactggtgga gaataaaggg gcattcactg 60003892
gagcctgtgg aataggggt gcatcgtaac ataaggacaa gtcaaagcca 60003942
tcctaattac tgtattgagg aaacaaccgg ccttgccctt ggattccagg 60003992
tagcccaggg ctgcagactc ttcactctta tctctctgga agacaaagac 60004042
acttgcaatt aaagttttga aacgcaagct tgtttcttca ttttcccttg 60004092
ggccatatgt tttcttttca aggagcagag ataataaatg cattgtgagg 60004142
ggagtaaggc agagggctga gtaaaaatca acagaccatt gatgggagcc 60004192
tgagtcagtg ctgtgcgctt tctttccttt aagaagcaca tctggaatca 60004242
aggtggtcag agggggaaat gctgatgggc ccaataacaa gcaactttca 60004292
agacggtgta taaagtcaat tgtgcagttt gctaaatcag aatggtgaat 60004342
atgtcaggac ttctaatac agttacctat atttttaagt ttttgttttt 60004392
tatcaaacc gacctaagtt agattttttt tctgtgcata ctatatattc 60004442
caaaaaaga acttgtgaca aatgggttaa tatggcaaat ttttatgtta 60004492
tgtgtatttt atcacaatta ataatatatg ttttaaaaat ctagtggcaa 60004542
aggtggtaat tcctgcctgc taatgaaaat agcatgaagt gcctagtatt 60004592
taaaccctta tggggtaatg gcaatgtcca atatgatcaa taccacacaa 60004642
ttctgacggt atgggtgtat attaactcac aatgcgtata aattagtaat 60004692
cagttatgtg accttatacc ctaccacct cactgcac ttagtcacac 60004742
gggctatctt gctgtttctc cgtcaagccg tgcagcttc ctccaagggc 60004792
cttggcaaat atgtccacct gtaatcctcc tcctggcacg tgctgtacat 60004842
ttggcttggt ccctggcttt aagcaggact cactcaaat gtcattcttct 60004892
caaagaggct tcctgtaatc ataccaccac cttacataga ttgtttcact 60004942
tttttcatga caattgttgc gaccagattt cttatctgt ttacttatag 60004992
ttgttcttct ccctggact gtaagccagg actctctcgg ttgagttcta 60005042
tccactgtat ccagaggatc tgaaattgtc cctggcgcag agtatgtgtt 60005092
cacttaattg ggaaataaat gaatgtgtat ctgattggtc gactttcagg 60005142
ttgtgaattc agtcagtggt gtcagcagct aatcaaatc ctgtgaacag 60005192
aactaggcaa aattaaatta ccctatgaaa acggacaaag gacttgaata 60005242

gacatttctt caaggaagat acacaggtgg ccaataagca caagaaaaga 60005292
tgctccacct cattagtcac taggaaaatg caaactggaa ccacaaggag 60005342
atactacctc acacacatca ggatggctat tattttaaaa accaaaaacc 60005392
aaacaaaacc agaaaataac atgtgttgtt gaagatgtgg agaagttgga 60005442
accctcatgc agtgctgctg ggaatgtgca atgatgccac ccctgcggaa 60005492
aacagttgag ggggtgggtgc ctcgaagagc taaacataga attaacttag 60005542
gattcctagg tatagaccaa aaagaactga aaacagggat tcagatactt 60005592
gtgtgccagt gttcattgca ggattattca ctgtagccaa aaggtagaaa 60005642
caacctaggt gtccatcagt ggatgaatgg ataaacaaga tatggctctat 60005692
acatgtgggtg gaatattatc cagccataaa aaggaatggc gttctggtac 60005742
ataatacaat atggatgaac cttggagaca ttatgctaag caaaattcgc 60005792
cagacacaaa gggaaaaata ctgtgtgggt ccacttacat gaggtataga 60005842
gagtggtcag actcagagac agacagtaga aaggtgggtt ccaggagctt 60005892
gagggagggg gaatggggag ttactagtta acggttacag agattctatt 60005942
tggggtgatg agaatgttct ggaaatagat agtggcaatc gttgctactt 60005992
attgccctg aatcactact taaaatgggt aaaatggcaa attttgtatc 60006042
tattttccac aataaaaaat attaaatggc cccaaagttt ttttaaaaag 60006092
gcattcaaag gacaggcata aaaagagcct aattcagtgt ttggcagtgg 60006142
gagacagccc tttctcgcct cccgaaatga gctgcattcc tggcctcctg 60006192
cagattttgc catccagagt tgccactttg ctgtcggctc ctgcctgcac 60006242
ttttcgtctc catctctgtt tcctccatga gatcctagcc caggctctgt 60006292
tcttgtctaa aacgagtttg caccttcttg cgctttctca tcccaacagt 60006342
ctttacaata tgtttcatgg tgctgctaaa aaaagaccct cccttccttc 60006392
tacaactcac tgactagctg ccctttcctg gaagccccga agcagcccc 60006442
accttttctt tctactgtca gaacatacct gccagcccc ccaggctctc 60006492
cgctgcacc tgcccagatc tcccatttgc tctgtcctct ccctcctctc 60006542
gaatccttct gtctctgccc cgcaacctca ccctccccag cttgtgcaact 60006592
tcctcttcta agtccttccc tatctctgtc tgtttccctg cccattcaaa 60006642

gccaaaggaag acgtggacac cagtctgagg ccagggttgc aattctcctt 60006692
cctcgtccac gatcaggag gatctttcca atgcattagt tctggcactg 60006742
ctgtgtgggg ctctgactgg tcacagtttt ccttcctctc tatatgtggc 60006792
tgtgtcctcc tttacaaaag ctgtgagagg gcagagacag gtcctgcctt 60006842
cagtcctaca gcaagccagg acctcatgca ggtatgggag agagctcagt 60006892
gaagatgcct ttgacagtgt gatgacagca gaacttcgta aagagattga 60006942
tacttcctcc tgttaaactc tgactacatc aaactctatc ttctggagaa 60006992
aaatcatttt tcgagataaa ggcgagtgc tcaggcaaag gtgaatgact 60007042
cagactcgtc cttaccgggt gattaaatga actcaacagc ctctttgcgg 60007092
ggaacagtat gtgtgtgggg agaggactga ttcgttattt gtaattttca 60007142
gtgagaccag tagaagctga ccagctgtga tgagtgcctt taagttggag 60007192
ttttgaatac tttttatcac tagatagaca ttcatagaat gcattttaga 60007242
atgtcccaa tccctaggcc ttgtagtccc agctactcag gggctggcat 60007292
gggaagatgg catgagcca ggaggatcac ttgagtatgg gaagattgct 60007342
tgaaccagg aggtcgaggc tacagtgagc agtgatcaca ccactgcact 60007392
ctagcctagg tgacagaatg agactctgta tcagaaaaga gtcccaaadc 60007442
ctttatcatt cgttttgggt tttctttgaa acagggctctc actctgtcac 60007492
ccaggctgga gtgcagtggg gcaatcactg ctactgcag cctcaacctc 60007542
ctaggctcaa gcgatcctcc tgcctcaacc tcctgaatag ctgggtccac 60007592
aggcacacgc taccacactt ggataatttt taaagtttta tagagacagg 60007642
gtctcaaact cctgagctca agcagtcctc ccacttctgc ctccccaaat 60007692
gctgggggta caggcgtgag tcaactgtgt aagctttttt ttttttaatc 60007742
aattataata ttgtttgtga cagttatagt ttcttcatga tcttctccaa 60007792
taaactagac acatattttc atattgtaca aatcacaaaa tgtatgagcc 60007842
taacttttgg cagcagaatt ttttttcaa gagctatgtg taaaatatat 60007892
ttcttagaaa tgaattatat tttaaact cagggcattt tctgttaaac 60007942
cctgtgattc tctgtatcta cctctgttgt gacttaggcc atgtacctga 60007992
ctggtataac ttaggacctc caagttttta atgtgttaca tgattgacag 60008042

gtttcccagg tagggtgaac acacccatgg ggtgtgccac gtgatccagc 60008092
aaggtgagca ggggatccta aaacactgcc cctttatcct cacggtctct 60008142
tataacacac catcttggtgta ggcgcctatg cgatgttgtt ctgaagcttg 60008192
aaatgtgaag ctctggtttg taaaaagaa acatgcctga tattttctct 60008242
gtgaatctgt aagattgaaa ttctatctgc cgagcttatt taaaatgaga 60008292
atgtctagga tattcgatca taattcgttt atgtcctagt taacagaaat 60008342
cacagatata atctggcagc agctttatca gcagacggac tgagtaaact 60008392
gtgtctgcct tcacccaagt gtggctcgtg gaactgactg aacccccaga 60008442
cagaaaagca ctgaaatgac tcggaccact catcgccaat ttcacattga 60008492
tgcctcaagt ttccaatccc gtgataaagg acttctttat gtgaaatcaa 60008542
acatgctttt taacgcatgc attttttctct agttgtcctg ctaaaatact 60008592
ctgctatgca gctttggttt gtcataatca ggttaaaagt gcacaaggat 60008642
ggtttgtgcg ggaagattgt caggccttga gaacttgtct ctgggtaccc 60008692
agtttatctt ttccatcatt tttcccctt ctagtgcacac cttttccct 60008742
ctctcccctc agggaatgac tggatggaag ttacatatac ttttactaat 60008792
tccactcagc tgtgcccgtg aatatccctc ctctattgga tacagaccac 60008842
tgcagtgggg tgtgatacaa tcacatctcc atttctcca gcagcctact 60008892
agaaaggctc tcagctttga attgaggagg cagaacctt gtgtttgtgc 60008942
agtctggccg tttgccagtg ccacatcatg tataggagt ctcacgtctg 60008992
cctctcagtg cagcaggata ggcacagtta ttaattagca ctattgtaca 60009042
ggtgaggaga ctcaggctga gaatggctt ttttttttt ttttttttg 60009092
gtcctgagat tttagaaatg tagtcagttt tattaaagaa atatcaggca 60009142
ttcttctctc cgggtcaaac tggaagccca gtttcgagga ctgccctggg 60009192
tagaaaaatc ctccttccct gaagcccaac tcagttcttg gggactgcct 60009242
ggccaggcta cttcactctc ttgtcaccag cgctcaagg accttgtccc 60009292
ctcctccaac ctgagttctc ctggccctta cttctgctt gctaaaattc 60009342
ccatgtgcag actgggtgtg gtgtctcacg cctgtaatcc cagcactttg 60009392
ggaggctgag gtgggcaaat ctcttgagct caggggttca agaccagcct 60009442

gggcaacatg gtgaaacccc gtgtctacca aaaaatacaa aaattagccc 60009492
ggcatggtgg tgggcacctg tggccccagc tactcgggag gctgaggtgg 60009542
gagaatctct tgagcctggg aggtcaaggc tgcagtgagc tatgatcatg 60009592
ccactgcact ccagcctggg tgacagagtg agattctgtc tcaaaaaaaaa 60009642
aaaaaaaaaa aaaaaatcct atattctgtc atgtcagact ttctttgtca 60009692
tttaattttt ttgaatagga atctgcccta tctggtgtct gggcctcacg 60009742
tgattcctgc atcatttcca ctctgggta tgaatgtttt gctgccaatc 60009792
accatggtgg gacgttttcc tcacattcac aggcacagga ctgtgccatg 60009842
atccagaata gaaagctgga taaaatagag ataaatttag ctggagaaag 60009892
cagctaagga aggggcagac caggaatgat agcccagaac atctgaattc 60009942
aaaggggtcta tattttgact cattaatgga aacacttgtg accgggagaa 60009992
actgagacct tctcgccggc ctgtcagccc aggtggctga gaaaaagac 60010042
attcaaagaa atggacaaga accaagagca tttgtttgta ggttactctg 60010092
atgtattaat tctacctttt atatgtttgt tgtttattta cttctaaaac 60010142
aaagtgttc aaagagaaat aattccttag ggtaagattg tcttatttaa 60010192
agaagctctt ttagtgtttt gggtagacag gttgctagta atttatttgt 60010242
attctgttct gggtaggatc agtttcgata gtgactttct ttaaagatat 60010292
ttttttccag gacagcaggg ctgttaagtg aagtgttggt ttcacattta 60010342
atcgtttctc tcttaagaaa aaccacatct ttcgactcta ctgtaagatt 60010392
cagaaatttg ataccatcct tactgaagtt atagccaaat tctgaaatat 60010442
agtcaaggat gatattttat aaaacaaaat ctatggaaaa tccctcattt 60010492
gttcttctag gttacgttct tttcgtctcg atttgacaag aggggcccaag 60010542
cctcttttcta catcgttcga tgtcagcatg aattttcagt ggagcaagaa 60010592
agtaatttta gtatccataa tgacttgcac tacaattggg ttaacagcat 60010642
ggaaaataaa tatttaagtc aaccttcctt gcaggattct aaatacagat 60010692
ctgctcgtct ctgtggctcc actggcagaa atgttatggt tcttcagctt 60010742
atggtttttc agaattagac tcaacatggc tttgcgtagg gaaataaatc 60010792
cacattgctt tataaaggga ttttttaatt tcaaatttat tatctcccc 60010842

gccctccgaa agccttgcac agactgtgga catggttatt ctagaagagt 60010892
ccatcagccg ttaagataaa caccagcctg tatgccctga aacaaatgcg 60010942
tagaagacac aaaaagacac aagaaagcga agcaagagaa gtcaaatcat 60010992
cttgctgttt taactccttt ttttagactt agcaaggaat ttgtaggggg 60011042
aatttgatg tgcagagaat atttgctatg aacagactaa tgttccttat 60011092
taattccagt gagttctgtc agaatacagg ttagttgata tagattctgt 60011142
ggaccaaaga gaatattttc agcttattga ttaagaacta tactctatca 60011192
atccatggct gcttttctaa acaagacctc taagaagtca aattatattc 60011242
cccaaaacac aagagcaacc tgatcccagc cagcctccaa ggcggtctgtg 60011292
atgtagaata ggccctcgat tagatcacia gttcattctc ctttcacctc 60011342
cagaagaatg caccccaaaa gatggccggg aacatggggt acctgtgcag 60011392
aagagtgact gggagagact gggacagagt ttcctaagca agctattggt 60011442
cgttttgaat tttgtctcat gggactgtat tccctattca ataaataaaa 60011492
atntaaaagt atttctgctt tatttgcttc atgaagacia ctgcgattcc 60011542
aaagctttga ctctatcagt cttaaagggt aactagaaaa atctcagtaa 60011592
ataaaaagcct gtacatctca actcagtcac caaaggcttt tccttgctgc 60011642
atcttaggga aaaagaggca actgtaagtg gctgacaaaa tcactctatt 60011692
aactgaagat ctggggcctt atgcccaaat ttccccattc cctgggagat 60011742
tccttaagaa cacttaagca ggaacatggt tttatcaaat gattgcttta 60011792
ctagggctgc taccgataat aatagctacc actttgcaac cctggggagc 60011842
ttggtcttgg aggatagagt ctgactgaag ttctaggcag gtgaaagga 60011892
aaggcagaag cctagagggc tactgccaaag gggatctgga gccatcttca 60011942
ggctcttgcc agctgctggc tggcagggca gttaatgggtg aaatggtaga 60011992
catcagaacc agaatactgt aggcaaatg agaggtcaga ctgggagggg 60012042
cagggacagc cgttcattca tgacacaaaa aaaatgacac ccagaggatg 60012092
aacctgacag gccgtgcagg cagagggaga ctggtataag gaaacagatc 60012142
cagggcagtc taacgggaaa ctgagcccaa gcatgtggga ctcaagacag 60012192
agtctgggga tcaggagcaa ggagagagcc agtctggcct gcagcgtcaa 60012242

ggggacaagt cgggtcaatcc tcaggtacct ggcaaagcaa gacaggctgg 60012292
agtgacagaa gcactggatt tcctaagagt tacaagcatg gggctgcagt 60012342
gcacagcgct caccaggcga tttgttgctg gaactgaggc atgagattag 60012392
aatgagacca gcacagggca cgctttacgg gctgtgtggg gaggaaaagg 60012442
gtctgcaagt ggagggaaaag aacactggaa gcagagagcc agaaaggaag 60012492
aggaaaagg gcaataaagg catgctttgt ctttggcatg caccaacaac 60012542
ctaaagagtt ttccagattt cttttattta cttgcaaacc acatttactt 60012592
aaaaatatgt acttatgttg cattttaagt tgtatgtata ttgccatgtt 60012642
gaaggtttga aggtatactt caaagtatat catgtaacta gagaacaaaag 60012692
taggtttctg cttaagctgg accctaaatg agattaaaag cataattttc 60012742
tgcctcacca tagcaatttt cccagcagca aaatttctgc tgctgcttaa 60012792
aagatctgta atcctataac tctgtcaagt agacatgtca gttttgggg 60012842
gatgaaaatg ttcaggaatt agatagccgc gatggttgtt caaccttgcc 60012892
aaagtgctaa aaaccactga acggtaggta tactttaaaa ggtttaattt 60012942
tatgggccgt gaattttata cctcagtttt tgggcagggg tgggagggca 60012992
agaggcacat tcaggtgaaa agtcatagt aggtagaagc ttaggagaga 60013042
gaaatggatt ttatatctgt gacaatcaat taaaagttag gacagctggt 60013092
catttctgga agcagtgact tccttgtttc ttcgaagagg tgtaaagctc 60013142
ctgagttgga ggataggtgg gttgaatgaa tcgcagccat actcctaaac 60013192
atggagtgaa ttgtctacat gttcaggtca gatatactca acaggcacca 60013242
gggcttgag cccaggacac agcttgtagc atctgacagt gcccctaagc 60013292
agctacttca gggatatccc atttaccaaa tccccctaaa aagtaccttt 60013342
ctgtgtgtag aacacaaagt atgtgctcat tttactgagt ctgtggctgc 60013392
ccccttaggg gatcagaagc aattaatacc ctttgtcatc tgaaatacag 60013442
tccaacttca tatttatcct gtttgccttg tcatcagcat tgcaacaatg 60013492
ctcatgaatc cttaggctcg gatgaatcca gctttttgac ccagtttgca 60013542
tggccgcatg tagttttacc actttgcctc tttcttctgt gcatgtacat 60013592
tacacacaga gggagacaga gaagggtggc atctaaaaca gagaaaagca 60013642

tctcagaagg gagaggtgtg gtggcttctt ttaagcaatt cttcctcagt 60013692
ccgctgggct caatgcagct tccctaagac tctgtcaccc agtgaataca 60013742
tgaggagcat ctgatgtgtg ttacccgggtg tccacgggga gtgttagcag 60013792
ggcccaggaa gcaagtccaa gtacaacctt cctgtcacac atcacctcaa 60013842
taacacactg ggaccttctc atcgacctca gcctcctcat aaccctttg 60013892
ctggccaggg tgaggtcaga aaggtccgtg atggctgtgt gccccacacc 60013942
cactcagcta gcctgggctt tcctgggttt ggtgctttct ttataaagct 60013992
gccttctata atggagctat tttgaggatg catggctttt tccaagccat 60014042
attatctctg cgccctccat ccgagcactt tcatatgcag atgaagccct 60014092
cccctgactg cctttgtgac actgggctcc agctggactg aaggtctctt 60014142
actgcctccc aagagctgtt tcaggcctca ttgcccctgt ttgaactgct 60014192
catattgtcc aaagtcttcc tacttctccc cactacctcc acctgccagt 60014242
ttctgtttcc tggctctggct gatttctatt tatcctggaa ggctgattac 60014292
ttaccacctc cctcaggaag ccatcctggc tgcttctgct tccttcttac 60014342
tactgctgag gtagggccca tctggtatgt gtttcattcc actctaagac 60014392
ccttgagggg aaggtttgtg actctgtatt cgacgacaca gcaggggaact 60014442
tgcataatc gcaagtgtgg tgtgcatacg tggatgtctg ttcggctaag 60014492
cccagttctt cagtttctga catgactgct tgtcaacagg agtgtgtgtt 60014542
gttttttgct cacaccaaga atgctgatca ggaaaagaac ttttctgtgg 60014592
caaactgata agaatctctg ggtgattata gatgcctggg ctgctctgtt 60014642
ttcttttggt ttactcagat gggcagattc agaaattggg atttgtctta 60014692
gaatcatacc gttttgaacc agaagggaac cagaggctga ggaagcttaa 60014742
acagctcctg cagtccttca ggcaacaggc agtgagggca gagcccagga 60014792
agcccctaca acaccttgct ttccccgctt tttaaaattc tctgtgtgtt 60014842
taacaagtta aaaggtaagc aggccgggcy tgggtggctca ggcttgtaat 60014892
cccagcactt tgggaggccg aggcgggtgg atcacctgag gtcaggagtt 60014942
caaggccagc ctggccaaca tggtgaaacc ccgtctctac taaaaataca 60014992
aaaattaggt ggtgcgtggc tatagtccca gctacttggg aggctgaggc 60015042

aggagaatcg cctgaaacca gaaagcagag gttgcagtga ggtgaggttg 60015092
cgccattgca ctccagcctg ggcaatagag caagactctg tctaaaaaaaa 60015142
aaaacaaaaa aacaaaaaaaa aaccctgtaa tcccagctac tcaggaggct 60015192
aaagtaggag aatcgcttga gcctgggagg tagaggttgc ggtgaactga 60015242
gatcacgcca ttgcactcca gcctgggcaa caagagcgaa actccattca 60015292
aaaaaaaaaa aaaaaaaaaa gtaatttggg gattcccttt ttgttttacc 60015342
tagttttatc cagaaagagc tgtgtggact ctctgcctga cctcagtgtt 60015392
cttttcagGT GGCTTTGCAG ATCGCTCCTC CATGTACCAG TGAGAAGCAT 60015442
TATGAGCATC TGGGACGGTG CTGTAACAAA TGTGAACCAG gtacacctgc 60015492
ttctgagcca ccttgcattg cccctcaaaa gtgggtgagg ctttcattat 60015542
tttttctgtc tgccagatga aaaaaagaaa ttggatagac gcgttatggt 60015592
agtggcaggt ggtaatgtct gtcactctga agacaaaaat ctttctctca 60015642
atagagattt gaagggattt taaaatccct tagaaaaaaaa caaaaacaac 60015692
tttaaaaact gttgcttaat ttgggctgaa acacaatttt caaaacact 60015742
atctctcgag atggcaagaa gtttttaaaa actaatattt tagcacttta 60015792
tgactcaaac tctcaaagt gaaatgcagc tcttacttaa aattgttttc 60015842
acagaaattt tattttggaa taaccacact ggaattgttg ctgctaaaaa 60015892
ttgcctaaac ccttgtcgta cttttttcca tatacctggt gaggagcaga 60015942
aggtggactg gctaccacct gccccaagtt gttctgccag aagtgtggct 60015992
gactatttct gcagccccag tgaaagccac agtccacggg gcccgactc 60016042
tctcatcatt ctggggaggg gaaggtgggt tacctataa caagatattt 60016092
tgatatttc agctacaatt atttattgga tgtgcagaac caagatccag 60016142
taatgggtcaa gtgtgtgttg gataggcggg tggggcgcag cgtgacactt 60016192
ggtcaaacga agctaaccat gagccggtag taagtgtaga ggaagttaac 60016242
aaaaagaagt taacaagaag ttgcctatcc agatggaagg cagaggggag 60016292
aggggatggg tgatgaagtt cctcttgctt acccctctta ttccctgagt 60016342
gggttccagg gaatctttca agttctgcgg ccagtttaa aatcatcatt 60016392
ctattccttt tttttttttt tctttttttc tttttgagat ggggtcttgc 60016442

tctgttgccc aggctggagt gcagtggcat gatttcaggt cactgcaacc 60016492
tccatctccc agaggttgag gcagcaattc tcctgcctca gcctcccaag 60016542
tagctgggac tacagtcacc tgccaccacg cctggctgat ttttgtatct 60016592
ttagtagaga cgagatttca ccatttggcc aggctagtct caaatttctg 60016642
gcctcagggtg atccgcccgt ctccgcctcc caaactgctg ggattacagg 60016692
tgtgagccac cgtgcctggc ccatcattct attccttagc agactttttg 60016742
gggtgcagagg gtggttggct ttttacttag aagaattaag agactgctgt 60016792
gaccacaggc tcagcggacc caggtgggggt tatttcagcc agctgcgtgg 60016842
cctgaggagc ccagggtgct gcagtcactg cattgtggcc tcttctcctg 60016892
tgtcatattg tctttggggg gtgtcctggg atcatgggca ccaatgatta 60016942
ttggtcccat agatgggtgc aatttttgtt gctgttttgc tttgtgttgc 60016992
tgtttttgtt tggttttttg atggttgcatt ttttctccct cattttttta 60017042
agGAAAGTAC ATGTCTTCTA AATGCACTAC TACCTCTGAC AGTGTATGTC 60017092
TGCCCTGTGG CCCGGATGAA TACTTGGATA GCTGGAATGA AGAAGATAAA 60017142
TGCTTGCTGC ATAAAGTTTG TGATACAGgt gagcccgtcc tgtcagtggtg 60017192
tcagtgaggaa gtgtagaaac ctcagacctc tttttctata gaaacatttt 60017242
tagaggcagc caatgatgtt tcgtttcagg aacatgaaag gaagttgtga 60017292
ctacacatcc caagaaagat gcgttttaga tccccaggc ctctgttaaa 60017342
attcttcatt tagaacattt gttctggaat atatttatgt tgccatttaa 60017392
tcatgggaca catcatagac ttgacataat gtttcataa tgttcccacc 60017442
tatttttgtg tggtttaatc ctccctgaaa tcctgtaggt agccatactt 60017492
atccctttta ttttatttgt ttatttattt atttattttt ttaatttatt 60017542
tgagacggag tctcgtctg tcgcccaggc tggagtgcag tggcgcgatc 60017592
tcagctcact gcaagctctg cctcccagggt tcatgccatt ctctgcctc 60017642
agcctcctga gtagctggga ctacaggcac cccccaccac gccagctaa 60017692
ttttttgtac ttttagtaga gacggggttt caccatgtta gccaggatgg 60017742
tctcgatctc ctgaccttgt gatctgcccg cctcggcctt ccaaagtgtc 60017792
gggattacag gtgtgagcca ccgtgcccgg cctatcccct ttaaagattg 60017842

agaaacggag attcagagag gttgaataac ttctccaagg ttaacacgtg 60017892
tgaagcagga ctcaaaacca gctctactct tcaccttttt cctaaactat 60017942
aaatatttta ttaacacagt ctgatctcct taccagactg tcttaagttt 60017992
cttgcctgga atgtttttta aagtatagtt tatttgaagg aatcaggagc 60018042
aaaatatgtc tcttaattct cttaagaaac agaggttcct ttctctccct 60018092
tctttccttt ttccattgag ctcatTTTTT gaagaaaccg tgatgttagt 60018142
cctgtggaga ttgcacaggc cacattttgt tggttgcatt cccttggat 60018192
catttaatgt attattctgt cccttatatt tcttttttct ttcttttttt 60018242
tttttttttt tgagatggag tcttgctctg tcaccaggc tggagtgcag 60018292
tggcacaatc tcagctcact gcaaccactc cctcccgggt ttaagctatt 60018342
ctgctgcctc agcctcccca gtagctggga ttacaggcac gtgccacat 60018392
gcctggctaa tttttgtatt tttagtaggg ctgaggtttc accgtgttgg 60018442
ccaggttggg ctcaaaactcc tgacctcaag tgatgcacc gcctcagcct 60018492
cccaaagtgc tgggattaca ggcgtgagcc acaatgccc gcctgacccc 60018542
ttcttataaa ttggttgta gatcaatttc ttataaattg gttgttagct 60018592
ctagaaggcc aatcagattc tgctttgttt tttgttttgt ttgtggcaaa 60018642
cttcatatat aatatagttc atacatagaa tattagaacc atgtaatagc 60018692
tgagcattcc tctttctaac attagcagct gctgatggtc atggtttaga 60018742
tgtgtttcct ttaagggctg cagaaagggt atgttctgat tctctcattt 60018792
ctttttcatt tattagctgg catgctttat gaagataaac ttccctcatc 60018842
aactatttat tgataaagt actgcattta tcctgtagtg cagtacatat 60018892
agaaaagata gaataaatgc ttttaacctt atttatcact ttgcaaaaca 60018942
atatcttaat catccagcat tctccaagg acttatatta tggagctatt 60018992
tgagggtgtt tagtttcagt ctattgcagt tattgttgct gttgtttgtt 60019042
tgtttgtttt tgagtcttgc tctgtcgccc aagctggagt gcagtggcac 60019092
aattttggct cactgcaacc ttggcctccc gggttcaaac gattctcctg 60019142
ccttggcctc ccaagtagct gggattacag gcacgtgcca ccatgccctg 60019192
ctaactttta tatttttagt agagagggcg tttcaccgtg tgtccaggct 60019242

ggtcctgaac tcctgacctc aagggatccc cccgcctcgg cctcccaaag 60019292
cgctgggatt acagcatgag ccatggctccc ttgcctgcaa taactgggtg 60019342
taatgggtgct cagattgtca catttctatg aggtggccca aggtgttttg 60019392
atacagccca ggcattctatt gcttccatgc ttagcttgca caatccttgt 60019442
cttaaactac aatcagacat ttctctaagg tttcatgatt gtttttagag 60019492
gaacatttta tttagtgacc tcagtctgga ctctagagaa gactcactac 60019542
tggattgatc cttgtgtata gaagtttttt ccccaatgga cagaattaga 60019592
gaataagtgt ttcttttaac accataattt ttctaattgt ctggagacag 60019642
ctggcagatt ttggctaggg aaggtaacat ggaaactcca ctgagcagaa 60019692
gcatctgatc aagccttttt tatttcccac tgcttagtaa tgacctgac 60019742
tcattgctgt ctcttgaaa taaagattca ttctgtctac tgccaaagtt 60019792
gattaaagcc aaaaatctgg tacattacat acaatatttt aaattatgtc 60019842
aaaattattc atcaccacc aggcttacat tcggatggga tcctaggagt 60019892
agttggaatt ttccagagaa gtggcatgtg tctgtggacg ttcccatgtg 60019942
ttgtggacat gtttttgcac tttggccttg atgttgacaga gctgactggg 60019992
gccttggaag agtgggcact gcaggaaatg gggacttctc cagggtcacc 60020042
aagcttgggt ctataaagat tggaaatagg aatgtcccc tcctactgg 60020092
ctgtaacttg agaccataag agacagcggg tttctggttt gttggcttgt 60020142
ttttcccttg gaattcctat aagtattcag gaatataagg tgcaggggct 60020192
gtttggacaa tccaggtgag aaggagccct agaagggtac aaggtctgtt 60020242
ttaaataatg ttattgtttt gtatcatgtt ggggggtatg gggatcatgta 60020292
cttatgtgca gttgactgtg gttatgcaca gtagttatgt tctataaagt 60020342
caccgtgaac actgaattag caaatcctga gccattactc ctagtggatt 60020392
acagggtgag gttcctgcaa gcctccagtc aactgtcac ggactgatca 60020442
ccacgtaaac ttgtttcatg tgtgtttctg ttaaagacac cttatttgat 60020492
acatgttgtt gattcattaa cattgcactc atggccaaca gcactgtaat 60020542
tcatgcctga gtgaagcttc tctaacacac ttattttctc tgtaaggcac 60020592
accacagttt tcttgactt agaacgctag acagctcttc agcacgacag 60020642

ttgggggctg ttgtaagcag ggaaatcacc aacaaaaagc tcgtttacct 60020692
tctgtgagct gaaacaagaa ggcagagcat cgattaccca acctcagcca 60020742
gaaacctgag tgtggagcaa ctcaaaatgt acacggttct gtccctgaag 60020792
gactgcagaa gtaccaagag gattgatttt ggggtgcaaa taaattttat 60020842
tgagcagggtg aattcacaaa tatgaatctg caaataatga ggactattga 60020892
ttgatcaata atttgattca tatttgtgtg tgtatgtagt ttataacaga 60020942
tacgtgtgtg tgtgtgtgtg tagtttacia cagatcaatt cccacgtacc 60020992
tgcattccag aaaaactgga aggggccagg agatttgaa caagaaggcc 60021042
atgtgttgtg aaaacagaaa caagcatgtt accctgagtg cttgaggaga 60021092
gtttgactcc aagcatgtca ctgggcctgc ctctgtacct tctccatgca 60021142
tgtaactcca caacaaccg ttttcaccct gggatgcctc aggatcctac 60021192
aatgaatcct aaacctccag aaacctgtt ctctaaggtc cagtcttgcg 60021242
ttagtcttat acatatggca tttgaattta caaaaaacga ggaagctcaa 60021292
ctctgtgacc cttctgcatt cgccaaaaca ttcaatgatc atcaattccc 60021342
aagtccttat ctttctacta acatgaaaat tgacttttaa aaaaagccca 60021392
caaaactctt aattatgaga gagagaagaa cccccctg acgttttctg 60021442
gccagtgcag gaagtgcgag gaggaacttg ggacttctcg agcagtgtcc 60021492
tggtgattca ctctgcaggc ctgccaggcg ggctgctgct ctgggctgga 60021542
tgttgatag cgcagtcgtg ggcggtgtgt ttgggctgcc tgcccctccc 60021592
tggccactga cctgtctctt gtctcccgca gGCAAGGCC TGGTGGCCGT 60021642
GGTCGCCGGC AACAGCACGA CCCCCGGCG CTGCGCGTGC ACGGCTGGGT 60021692
ACCACTGGAG CCAGGACTGC GAGTGCCTGCC GCCGCAACAC CGAGTGC GCG 60021742 R129C
CCGGCCCTGG GCGCCAGCA CCCGTgtacg ggttgatgt gtgcgtctgt 60021792 p.A139Wfs*19 and p.E132Dfs*19 H141Y
cggctcttgc tgagccatgc aaagccagct ttgagacagt cttgataata 60021842
gcagcaagaa agctccaggg tgctaggcag cattggagga acctgagga 60021892
tggggaaagg tgggggctga tttccacga gatacaggcc caggcaagac 60021942
ctgagaatga atcctcggct taggttcttc aaagggactg cgggcaattt 60021992
gcctacatgc tctggccatg gccaggggtt gctggggctc ctccatccgt 60022042

gaaaacctgg gatccccact taggagccag caggatagtg caggggtgat 60022092
tggacgtttt tgaaaagtgt gcaccatta gaattttgga aaaaccatgc 60022142
atccccacc ccagcacgtt tttaagttga catctaaaaa gttttgttac 60022192
aagtttgaag aactgataag gacttagtta ccaggggaatt ataactgcga 60022242
taacactgaa gaaacgaatc caggggaatg taaacaccat ggccatttgt 60022292
gccactatg attcattttt aaatgcgcca attgtattta actattggac 60022342
agtttacata gttactttct ctcttttgt ttcctatcca ttccaccttc 60022392
cccatagaat tttatcctga tatatttttt atgcttggag ggtttttact 60022442
aatcaccttt tcacattcga atatgcacat attgaaaaat atgcacctat 60022492
ttgaaatctt tatttatttt atttattttt tttttgagat ggagttttgc 60022542
tcttgttgcc caggctggag tgcaatggca caatctcggc tcaccgcaac 60022592
ctctgcctcc caggttcaag cgattctcct gcctcagcct ctggaataac 60022642
tgggattacc gggatgcacc accacgcctg gctaattttg tatttttgggt 60022692
agagatgggg tttctctatg ttggtcaggc tggctctcga ctcccgactt 60022742
caggtgatct gccacctcg gcctcccaa gtgctgggct gggattatag 60022792
gcatgagcca ccacacctag tcaaaatctt aatttttaaa tatttacttt 60022842
gactgaggggt taaaaacatt tcttctggac caagttgtca ctgcatttat 60022892
tattacacia ttggtcacia atgaatatat cctattttgc tatattataa 60022942
tcataaaagt aaaaacttct gacctcata atgagtggga tggttttcc 60022992
aattcatata tttgtggcta aatattactt cttgctaaaa tgcaacagca 60023042
ttcaacatca attctgtttc tactttttgt ttttatgtat gtaagtgtctg 60023092
agaaatttgt tcacataaat aactgaatgg caaaggaaac actttgggta 60023142
taggtgtgtc cctcaatttc tttcagtacc ttctgattta tgtggccaag 60023192
ctcacctact gatgtgatat cagaagtat ttttaacgct ctatcagttg 60023242
agaattcaat tgtgtccttc aattttgttg aaagtaaagg aatagaaatc 60023292
cttttgagtt gaaaaagtat ttcttagagt aatttgcttt cctgacttct 60023342
aggaagtata acaaaagcgt tttttccac gacttaacaa atgattattt 60023392
atgcctatta ctcatccct tagaggcacc tggttttaac ccaaaatact 60023442

tggacaggggt tgggagaatt aaaatattat ccatttcaat tcatatcaag 60023492
gaaaatgtcc atcacagagt ctaactgaca cattcgggtct ttattatcaa 60023542
atgcattgac taaaccagat gtgctttctc ttacaaaaag tctgacttga 60023592
ttttttaatg gttaaaatgg atctccctat cacagccaac tccctctgaa 60023642
ttctgattct aaaatagaag aggcccagag cctttccttt aggttttcac 60023692
cagcatgtca catcagggat tctattagac tttctctctg ccttgtacct 60023742
ttggaaatgg gttcattttt ggacaaaata ggttgaggat agaggggaaa 60023792
cggtagatga atggaaattt cactcctgtc ccaccctgca taatttcaat 60023842
tcagaacaag tcagcctgat cgcagctgcc ccatttctat catcctgctt 60023892
ttgcccttaa tagagcggga aagggtgggaa ctgtgctggg aggcgcagga 60023942
actctgccat ccccaatgtc cacttgctac ctctgtcagc atctcagagg 60023992
tttggcagca tagcagcaaa ctatggggtg ggtaaaaagt atatcttttg 60024042
tgaaatggga aaagtgtgat tatgaaaggg agcaaggaaa ggagcctgca 60024092
ggatgcttct ggtaggtcag tgttactaag agtcatatgg aagtcaagct 60024142
atggaaatta acacccttaa ccctttgtat gcctgttagc ccccgtctct 60024192
tcgattttga gggcttctca caactctaga ttgtgcttct cttttaaaaa 60024242
gctgttcaaa ttaatgtgag ttattagatg tcaactgggc tcttcttaat 60024292
aaagattcaa ggcaaatcaa attgctaggt gaaggagcgg gtaccctacc 60024342
tagccagcca aattgcagaa atcaacagta tacttcatac ttgactctgg 60024392
acaagaaaa tttatttcct ttttttagtg ttttattcac gaaagtaaat 60024442
cacagaagtg ctactaattt caggagtaat ttgtggtttg ggcaccagcc 60024492
agttgcctga ttatgatatc acatagtagc caatgttctt cttgggactt 60024542
accgaagaat catcatgtgt ggattgcagt agaggggaata ggcataaggaa 60024592
acctgagaca tttattttga cagtgtagtt tttgaagaat atgagagtca 60024642
agtcagttca ctaaccagga tcagctccta ctttcaacac tgtccattaa 60024692
ggaaggggtc taagatccat tgtgccactg tgtttatcag taaagtttta 60024742
ttggaacaca ccctcgtgca ttgcttttaa tgtattgttg gactgctttc 60024792
atgctatgag tagctgcagc agagaccata ggcctgcaaa gcctaagata 60024842

tttactctat gaccctttat agaaaatggt tgataccaac ccttggttgc 60024892
agggaaagag acctgtaggg ttcttcctcg tcttcttttt ttaactgaga 60024942
aaactttggt gacactctga tatttggact gaggagatta agctcatcag 60024992
aagaggtcag gacagtgacc ttcaaagcag taatgtgtct gccattccct 60025042
gcagacagag gctgggctag ctggcagggt catgggggaa aacaagagac 60025092
agatagcagg agcagtcaac atcggctccc agactaggaa acaaagtgtc 60025142
ggtgaccagg ggagtggctc agaacaacaa aggtcatga ccagagctag 60025192
cctgacctgg acatcacata ccagtgttag tggcctgaca tcaagtcaat 60025242
tacctttctg agcgtggttc cataactcac tgctgggggtc agaactgctc 60025292
tgtgggcccc agcctgtggg agctgaagaa gttagacaca ggggtgggca 60025342
caggggtggg aggtgagggc agagaggggc agcgcctcac ctccagtcct 60025392
ctggagtccc agcctggatg atctctaagt gacctcgttt gtttttgtt 60025442
tgttctgtct gggttgtttt tttttttttt tctcacagTG CAGCTCAACA 60025492
AGGACACAGT GTGCAAACCT TGCCTTGCG GCTACTTCTC TGATGCCTTT 60025542
TCCTCCACGG ACAAATGCAG ACCCTGGACC AAgtaaagtaa caacaaagga 60025592
gtcagaagag atggttgggt tttaaacaac tcaacctcca ctgtctcgtc 60025642
tggttgaaa acggacggat tctgttgggt taggcttcct cttgaagcca 60025692
cgttcaaaat ggaaaaagtc tgtcaattca gcctggggaa aataaaccag 60025742
tcaaactaat tcttcagccc tatgtgtgac aggaacttcg tgtgactttt 60025792
tagatttggg aatctgtgac ttacggttgc agctttttct aaccttgttt 60025842
ggttgaaaat gatttataac atttattcag tggtcacgcc tacttctccc 60025892
gatttcccaa catcactgat ttattcatcc agttatttgt gtgtgtgtgt 60025942
acatatagaa gcctcctggt tatataaatg tttgcatgct gtcaacatcg 60025992
tggtgttttt tttcacatat tatatcctga agctttttct atattagttc 60026042
accagttcat gattttcttg gcttttcaca gctgcatagt atttcattgt 60026092
agagatgtac tgtaagtatt gtaataagtt ctttattgat agtcatttag 60026142
gttgttccca gtcttttaca gtaatacata attttttaat gaagaatctc 60026192
atatatatat gatttctcac gtatgtgagt aaatctatag tggaattcat 60026242

gggtcctttc attgcatggt tgttggtgca taccaataat caacataatg 60026292
attctttcag ttcctgtat atttcttatt aaatgtttat tttctgctgg 60026342
gcatggtggc acgtgcctgt aatcccagct actcaggagt cagaggcagg 60026392
aggtttgctt gagcccagga gtttgagaac agcctgggca acatagcaag 60026442
accccatctc acatttttaa acaatgaaaa ttaaattaaa atacataaat 60026492
aaatgtttat tttctgattc acttatccaa attttatggt caagaggatt 60026542
ttctgtgttt ttcaaaaaga gcaatcagca aaagtatgtc acttaacat 60026592
gtaattgaag ctattggaat atgcattttt tttttcttga gacatgatct 60026642
cgctctgttg cccaggccaa agtgcagtgg taaaaacacg gctcactgca 60026692
ccttcaacct cctgggctca agcaatcctc ctgcctttgc ctccacagta 60026742
gctgagacca caggcacgta caccgcaccc agctgatttt taaatttttt 60026792
gtagagacag ggtttcacca tgttgcccag gctagtctct aattcctggg 60026842
ctcaagcaat cttcttgcct cagcctcca aagtgctagg atgacaggcc 60026892
tgagccaccc aggcacggcc agaataattct ttcctgaaga ctctgctctg 60026942
ctcctttgct gaccgcaatc tcagagtagc tgtcagagaa cacaggcagc 60026992
gtttgctttt gtttatttgt ttgtcccacc ttgtgctggt ctctccctg 60027042
tggaaggcac aggggattca aatgtccaag aaggcgtggg ttcctctcct 60027092
gaaggagctg gcaatctggg agagttttgc atttgttcac tttttaaaaa 60027142
acaagcttat aaaaccaaag cactgaacca cttttcccc cacagCTGTA 60027192
CCTTCCTTGG AAAGAGAGTA GAACATCATG GGACAGAGAA ATCCGATGCG 60027242
GTTTGCAGTT CTTCTCTGCC AGCTAGAAAA CCACCAAATG gtatgtttaa 60027292 ~~delExon6~~
aaagagcctg ttggttgata gatgtgcccc aggggtgtca gctggtttag 60027342
atccctccca gatggcacgt ggatttgcgg gcgtcctctc cccctttatt 60027392
tcatcccgtg catggtcagc tgaatatttc attctcatca gtattttaat 60027442
tccaggtatg ttgtttcctt gataattttc tacactggat tgggggtaac 60027492
taataatggt ttgatataca taaaaagaaa atagagctgc aaacataaat 60027542
taaaatgctc agacatggtg ggatgatggt ggtcacaagt gaggggtgtct 60027592
atgaggagat tttagtcac tcccaaatt gttaggatct agctatcatt 60027642

atctatggaa catgtttag attagattaa attaactctt ttttttttc 60027692
tttttgagat agagtgtcac tctgccaccc aggctggagt gcagtggcgt 60027742
gatatacagct cactgcaacc tccaactccc gggttcaagc gattctcctg 60027792
cctcagcctc ctgagtagct gggattacag gcgcacacca ccatgcccag 60027842
ctagtttttg tgtttttagt agagacaggg tttcacctg ttggccaggc 60027892
tggctctcaa ctcctggccc caggtgatct gcccgccttg gtctcccaa 60027942
gtgctaggat tacagtagtg agccactgtg cccagccaca ttaaattaat 60027992
cttaagtaga gtttcagatt gccagaaagt tgatggtgga ggctggttac 60028042
ttggtgagca ggacagtgtg gaggtgtggg tccagatata ggaagagatt 60028092
gcttcagtgg caaggagacc tttcagatga ggaaagagaa caataggcca 60028142
cagaataacc gggttaacaa gctttgacca agaaatcagg ggtttggcct 60028192
tgatgttttg ggaaacagga agacattaaa gcattctgga tgtggagtta 60028242
cacaatcaga gcaaactttt ttaaagacca tttggcagat aacattaaat 60028292
ataactgaag gaataaaaag ttattttaaa aaagaggaga ggaaaagtag 60028342
gagtccagga aaccaggtca tgtaaataca gagttttgag caaggattct 60028392
agcaatgaag tgatcagggg gggatgaaga gaacagttgg gtccacgtgg 60028442
tgtcggggat gaaaactaca gaaatatttc acaggatggc tgtggttctg 60028492
ttctcatgac cagcaaacc ctggtgccct gttgctatta ggaaagagat 60028542
agaagaagct ccttttgtct gcaggggtca tttttctggg gatactgaag 60028592
ggttctggag gttagccaaa atgagactgg gtgatgtggt gagcatgatg 60028642
agagctgttc taaggtagaa acaccgtaat ggccctggct gctctcccgt 60028692
agagtgaac cggactgagc agggctggct gagattgtgg atctcaccct 60028742
ttggaatgtg agtgctcgcg gacaaagggc agccaagggg ggggactgtc 60028792
acttctgcta tcccagacca acatttttga ttctgagggt tgatttaccg 60028842
ggatttgttt ttcaactgcg taaaattaaa gaatctttac taccatattt 60028892
ctcattttct tccaatacag **AACCCCATGT TTA**CTTGCCC **GGTTTAATAA** 60028942
TTCTGCTTCT CTTCGCTCT GTGGCCCTGG TGGCTGCCAT CATCTTTGGC 60028992
GTTTGCTATA GGAAAAAGG GAAAGCACTC **ACAG**gtattg tgtctatggt 60029042 [K240E](#)

ggtttttgca aaccaatctt aaaagataga tttctaggta aatgctttgg 60029092
aagttgagta gattgtctac ttgctgccta tggatgatctg cttaaactaa 60029142
agcaaaacac gttttatcat tctctggcaa aaagaaacaa aactccaaaa 60029192
acttgaaaaa gccaatatcc tgcctagttg tatataaggg aacaggaata 60029242
cgctggcggt caggaaacgg atgacttgta agctctgtat ttgagttgtg 60029292
tagactctgc agcatcacat atatgggagc ttgcatttat cctagaatac 60029342
atcaattttt aatgcatgct tttaaaatat acataaaata tttagatgac 60029392
cggtaggggg gaatttctga ctggagtgtt actttgaaat aagaaccttc 60029442
ggtaggggtg gtggctcaca cttgtaatcc cagcactttg agaggccgag 60029492
gcaggtggat cacctgaggt caggagtttg agagcagcct ggccaacatg 60029542
gtgaaacccc atctgtacta aaaatacaaa attagccaga catggtggca 60029592
catgcctgta attccagcta cttgagaggg tgaggtagga ggatcacttg 60029642
aacctaggag gcagaggttg cagtgagcca agatcatgcc attgcactcc 60029692
agcctggaca acaagagcaa aacttcatct caaaaaaaaa aaaaaaaaaa 60029742
aaaagaacct tcgattatga aaataagtta tattgaataa aatttgggtg 60029792
cttattctta gaatagacgg tcaagtctta tcctgtttct tgggaataat 60029842
ttccccacac aaatttgta gtgtctttaa acatcacgtc atgtttaact 60029892
tgtagactac aaagctaaaa atgtgtaatt tttacgaaag gattcaaggc 60029942
atcattagat ttcctaagaa tatctcttaa atctttcctt taatattcaa 60029992
gtcattctct tttgacttga atattaaaa cctgctgttt caccatcctt 60030042
ttccattttc agttgctctc ttattttatt atttatttac ttattttatt 60030092
tttagacaga gtctcgctat gttgcctagg ctggagtgtg gtggcacgat 60030142
ctcgactcac tgcagcctcc gcctcccagg ttcaagtgat tctcctgcct 60030192
cagcctcccg agtagctggg attacaggca tttgccacca cgcccagcta 60030242
atTTTTgtat ttttagtaga aatgggggtt gaccatgttg gccaggctgg 60030292
tctcgatctc ctggcctcag gtgatccact ggccctctgcc ttccaaagtg 60030342
ctgggattac aggcgtgagc caccacgcct ggcccagttg gttgcttatt 60030392
tatagggcc acctttgcct tgctgtgatt tgatcagttt tcccacgtca 60030442

cactcttgga cttcaagaga ccctgcatat ctagctactt ctctaaccat 60030492
tacattgcc aatgaaacac tagacaatca gaagattaat taaagaggaa 60030542
agatggggat tgcagatgcc agtgттааgс agtgagcaat gtttgagtga 60030592
tgaccctttt tttttttttt tttttttgag acagagtctc gctctgtcgc 60030642
ccaagctgga gtgcagtggт gtgatctcag ctсactgcaa cctccgcctc 60030692
ctgggttgca gcgattctcc тсcctcagcc тсctgagtac ctgggattac 60030742
gggcatttgc caccatgcct ggctaatttt tgtattttta gtagagatgg 60030792
ggtttcacca cgttggtcag gctggтctcg aactcctgac ctcatgatcc 60030842
accaccttg gcctcccaaa gtgctgggat tacatgcatg agccaccgca 60030892
cccagccaag tggтgaccat ttcttaaaga gtctgttcat tgttgaatgc 60030942
ctttatttag tgcagcttca cctccttaac aacatcatta ctagggattt 60030992
ggataatgca tgttcagatg atgaaggтсg cttgtaggca cgtttatgtg 60031042
agataaacag acttcctgat gttttgttct ttaggttttt ctttttgata 60031092
ctattttact gccatatggg cctaccattt agtgaactgg atgtcatgac 60031142
tgтtagctct тсatcctttc atccatacat gtttattgat catcaggгac 60031192
tgгactgaca ctggggтctc aatatcgagc aacacagaca cagccagtgc 60031242
cctcctggag gaagcatctt agtggгcagg gtaggггtta agcccacaga 60031292
gggaagctga gtatgcaaga gaaggтгctg agcaccaagt ggсagatgac 60031342
agaaggтсag cccatccctg gggccagcca gggтctcca gaggaggaaa 60031392
tgggтgagtt aagatctgaa agacaagtca gaattcacta gacaagggгc 60031442
atcaggagaa ccacaggcat тсtatcгtga gagagctgca tgatgaggгg 60031492
agcacagtgc attagcggгc тggaaggгc таatggcacc gtagcagaaa 60031542
gccaggгacc aagtggaaga тgaggгггga gaggaggгca тggгgagacc 60031592
atgtagcggc тgctgaaggа gtttgctcct тgtccttagc aaagggгacc 60031642
aagggгггc ctctggcttt agagtagcaa acaaatgtgt ggtacagtga 60031692
gagtagatgc aggcгcacca гttaggaagc тgtttгcagt тgtccagagg 60031742
agaggтgatc atggcaggтc тgcatgttta тсagctccgt ggacaggтat 60031792
tatttttttag тgccatttgt gattgtctag actgattcct ccaaggaaac 60031842

agctgcaact gtccttttct cttttggtgg ggggtaggga gggcgtggtt 60031892
taccttgata tataattgca aaataagaga aaagaagcaa gaataatgat 60031942
gataatagca atagctgaca catattaaat atttaatatg tgctgacatg 60031992
actatatata ttttgctgtg actacgtaca tcttcacaac agcaccatga 60032042
ggtagggcact attatttccc ctattttgtg atgagactgc ttagcaccct 60032092
ccctggcacg cttaagtgct cattagctgt tacactgaac tgtgatgatc 60032142
ttcccagga gaacctgaca actcctaact ttagtcgggtt ttgtttttta 60032192
ttgtttgtgc tttttgagac agggctctcac tttgtcacc aggcaggact 60032242
gcagtggcac aagcgtggct cactgcagcc tcgacctccc tcccgggctc 60032292
aaacaatcct cccacctcag ccccccaagt agctgggacc acaggcatgc 60032342
accaccatgc cgggctaatt tttgtatttt tttatagagg tggggtttca 60032392
ccatgttgcc caagctggtc tcaaacctcct gagctgaagc ggtccgcca 60032442
cctcagcctc ccaaagtgct gggattacag gtgtgagcca ccgggtccag 60032492
ccctaacttt agtctttata gtgaacccaa cattaaatgt tcattagaag 60032542
tgggataaaa ttgtatcttt gcataatata aattcataga tttcttaaaa 60032592
ttcataaaat ttaacctttt aggtttcatc acttctgtaa gagtgggtgg 60032642
agatgtactt ttttgaacat attcttcttt cttctgagaa gcagccagat 60032692
atagtggaaa aggtcttggg gcccgctggt ctcagtgggt ctgacaccta 60032742
gcttgctgtg tttgcctcac ttttatagta cattcaacct agttcactgg 60032792
aaaaaccagt ctcttagaca tgttttcttt gttcttctat gatgtctaac 60032842
ttagtccctc atagccaaag aaaacttgtt aagagaatga gaatgtctat 60032892
agtcatagca gcacctctga cagcccccaa atgtgcccag aggaagtcac 60032942
tgaaacgtta gaggatcatg ttttgctttg catagaacag gaagttctgt 60032992
ttttgatggg agtaagatgg cttcatagcc tttatttttt attttttatt 60033042
tttttatttt attttttggg ttttttgaga cagagtttctg ctctgttgcc 60033092
taggttggag tgtagtggca caatctcagc tctactgcagc ctccgcctgc 60033142
caggttcaag caattctcct gcttcagcct cccaagtagc tgggattaca 60033192
ggacattgcc accatgcccc gctaattttt gtatttttag tagagatgtg 60033242

gtttcacccat gttggccagg ctagtcatga actcctgacc tcaagtgatc 60033292
cacctgcctt ggcctcccaa agtgctggca ttacaggtgt gagccaccgc 60033342
gcctggccct tcatagcctt taaatcagtt gatttacttt taaatgcttt 60033392
cactcccagg agtgctcact gaaagacttg cgggtggactc tgttgaaaga 60033442
taatattgaa ctgacctagt ggtcataata ctgagcctga tagagaaata 60033492
aaaatctaga atgattgcac ttatatgtgt agtgttcccc aaaagtcaaa 60033542
tatacagaga tatagaataa aacaatgggt agcagggaca gggggaaaga 60033592
aaatggggag atgtgggtcg gaggatacaa agtagcagat gtgcaggatg 60033642
aagaaagttg tccaggaatc taatgtacag atggggactg tagttaatca 60033692
tgttgatca tattcaagat ttttgctaaa tttgtagatt ttagcggatc 60033742
ttgccacaca cacataaaaa tgggtaacta agtgagatga tgggtatggt 60033792
aatttgcttc actatagtaa ccattttact atctatattt gtcctataac 60033842
atgttgata ccttaaatat acataataac ctttatttaa aagaaaagaa 60033892
gtgggaaata ataactgaa gtccttatcc ttgctttgtg ttttctagCT 60033942
AATTTGTGGC ACTGGATCAA TGAGGCTTGT GGCCGCCTAA GTGGAGATAA 60033992
Ggtagagtga acagttgttg gtgcctctgt taagtacatt caacagttag 60034042
gctggtagag ccacctagt cacatattga gcaccccccc ccacccccac 60034092
tttttttgag acggagtctc gctctgtgcc tcaggctgga gtgcaggggt 60034142
gcaatctcag ctcaactgaa cctccacctc ccagggtcaa gtgattctcc 60034192
tgcctcagcc tcctgagcag ctgggattac aggagccac taccaagcct 60034242
ggctaatttt ttgtgttttt aatagagaca gggcttcacc gtgttgcca 60034292
cgctagtctc gaactcctgg cctcaagtga tccacctgcc tcagcctccc 60034342
aaagtgctgg gattataggc aggagccacc gcgccccggc tcagctcctt 60034392
tgcttacagg gcatttccag gttcagtgat caaacctcaa attccaggat 60034442
ggatccctgc agagcagctc aaagcccaag tccaggctca ttctagatgc 60034492
ctgttttctt tgtctttggt tccacttctg tcatctctgt gttcatgtca 60034542
tttttttag taccaatctt gattgtctgg tacagattcc taagaaggat 60034592
gaactgcaac tttcctgac tctgtagtta ttctgtaac attttatggt 60034642

gacacagttc aaaattatag gaaagtagtg agaaaaggac aaagaccttc 60034692
catataccct agacataggc ccaccagttg tttctatttt ctctcattgc 60034742
tttgtgattt gcttactctc tgtatgtgtg tatatgaaca caggtatggt 60034792
ttcttcttga atcattttac agtgaatggc agactgtgtg tcccatatcc 60034842
ttaaatatth cagtgtgtat ttaagaacaa agacattctc atatataacc 60034892
atagtacatg tatcggaaac aagaaattta acaatggtac aatactatta 60034942
ttcaaccac atttgatatt aaattttcat taattatttc attatgtcct 60034992
ttagatcttt ctttcttttc ttcttcttct tttttttttt tttttttttt 60035042
ttgagacaga atctcactct ctcatccagg cttgagtgca atggcgcaat 60035092
ctcggctcac tgcaacctct gcctcccagg ttcaagcgat tcttctgcct 60035142
cagcctcctg agtatctggg attacaggtg cccgccacca cacccaacta 60035192
atthttgtat thttagtaga gacaggttt cactgtgttg cccaggtggt 60035242
tcttgaactc ctgaactcag gtgatccacc caccttggtc tcccaaaatc 60035292
ctgggattgc aggcagtagc caccacgcct ggtagatct actttctttg 60035342
atataaaatg tatacatttg aaagcataag ctcaaaactga tttctctaht 60035392
tccaggccaa ctcaacatga ttcatctctg tctttccctt tcccatatth 60035442
gaatctthct tthcccagct gtatgaaacc tggctcctat tathctcagt 60035492
atathctctc atthgtcaa thctagaata catagaactg agthctcagaa 60035542
thactagagc ataccacagt gatacacaga gctgcttact cgagttcaat 60035592
atthgtthac agthgtthtg ggtthttgta thtagattga gaathatgtag 60035642
tcagaatact gtgtthcaaaa gtcatttggg thtagctctc thcttgctca 60035692
gatgtgaaca tgctthtcat ctgagatgca gctacattca thtgthtcta 60035742
gttgthattc atthctagagt thctctgcac thcgtaath gaaataacac 60035792
aaagthccat agtcagthth ccatctgtac thgttatggt ggaaataatc 60035842
agtghaaaca ctgththcag caatgthtag ctaaaactgt cthaataact 60035892
ctaggtatta atgcctctgc thctgthtg taaatcggca gGAGTCCTCA 60035942 [E262*](#)
GGTGACAGTT GTGTCAGTAC ACACACGGCA AACTTTGGTC AGCAGGGAGC 60035992
ATGTGAAGGT GTCTTACTGC TGACTCTGGA GGAGAAGACA TTTCCAGAAG 60036042

ATATGTGCTA CCCAGATCAA GGTGGTGTCT GTCAGGGCAC ATGTGTAGGA 60036092
GGTGGTCCCT ACGCACAAGG CGAAGATGCC AGGATGCTCT CATTGGTCAG 60036142 G316D
CAAGACCGAG ATAGAGGAAG ACAGCTTCAG ACAGATGCCC ACAGAAGATG 60036192
AATACATGGA CAGGCCCTCC CAGCCCACAG ACCAGTTACT GTTCCTCACT 60036242
GAGCCTGGAA GCAAATCCAC ACCTCCTTTC TCTGAACCCC TGGAGGTGGG 60036292 V380V
GGAGAATGAC AGTTTAAGCC AGTGCTTCAC GGGGACACAG AGCACAGTGG 60036342
GTTCAGAAAG CTGCAACTGC ACTGAGCCCC TGTGCAGGAC TGATTGGACT 60036392
CCCATGTCTT CTGAAAAC TA CTTGCAAAAA GAGGTGGACA GTGGCCATTG 60036442 M416Cfs*110 D427N
CCCGCACATGG GCAGCCAGCC CCAGCCCCAA CTGGGCAGAT GTCTGCACAG 60036492
GCTGCCGGAA CCCTCCTGGG GAGGACTGTG AACCCCTCGT GGGTTCCCCA 60036542 R450W
AAACGTGGAC CCTTGCCCCA GTGCGCCTAT GGCATGGGCC TTCCCCCTGA 60036592 R466H
AGAAGAAGCC AGCAGGACGG AGGCCAGAGA CCAGCCCGAG GATGGGGCTG 60036642
ATGGGAGGCT CCAAGCTCA GCGAGGGCAG GTGCCGGGTC TGAAGCTCC 60036692 A507T
CCTGGTGGCC AGTCCCCTGC ATCTGgtaag tgacttcca gtctctcact 60036742
tctgagcaga agggccagtt cttggtacag ggtttggggg caggtattac 60036792
catttagaa ggaggaagct aatgggaaaa cctcagcttg tgctttttct 60036842
cttaataagc atttttacag gatggctttg gattcagtcc acgtgtttgg 60036892
ttataactg cgcccagcgc tgtgtggctt catcgtttac cactggggca 60036942
gtttctgcat ccatgcatat cccataccct tttgcattca ggcttttcat 60036992
gataggatta gacctcaagc cccagcactg accccgaaa gacaaagtca 60037042
acatcggcgt caggactggc tgagccaagg cattccctca gatttctgct 60037092
ttttggtttt tgttttcaaa gcaccttagg cctcttaa atctcccccaag 60037142
aaagcactta taagtttttag gaggacacac aaaattgttt agttaatcct 60037192
taattaatta atatttattg tgaataatgt gttgattcta taccaaatga 60037242
atgatacagt aaaactgtct tttaaaaagt ttcattgagaa aggccctttt 60037292
tataaccaca acgtatcata tatttatgga accaggcaga taattttaac 60037342
aatttaacat cattataaag atgtatcact gcaacactgc ctgagcatga 60037392
acaaccacc gattataata ttataacttt ttcccatgag ggtaaaacac 60037442

catctgtttt attacatagt tacaaaaggac tttgcagctg atagtgaggg 60037492
ctctggctct gagaattaac tgtcatttga agggtcaggg atctctttga 60037542
gaatcttccg aaagctacag aactccctc cagaaaaacg aatatatgga 60037592
tatatactat ttaaggggct tcacagaatc ctccaactca tattttttaa 60037642
aggccattc ataggccgcc cctctccaga gatgcttttt cttctctgct 60037692
tctttattta gactgcaagt ggtgctagca gccggtcttc gaattgtttt 60037742
ataaatctga ggtagctaga tctgtgcctt aaacacagag actgttttgc 60037792
ctcgtgggaa tgatggttcc tggctttaat ctgttcctca agcttgtggt 60037842
tttgctgcag ctacatagat ttactgatgt ataaattcag taatagcagt 60037892
tctcagtcaa acagaaagga ggagatatgt ttggggatat ttttcaaaga 60037942
actggtatgt tttcttctca gaagatctca gaattgttct tattttttaa 60037992
gattgtaagg aatctccatg actgggcttt gctgttcggt tgcattgttc 60038042
tatttctttt cttttctttt cttttctttt ttttttttga gaccaagtct 60038092
cactctgtcg cccaggctgg agtgcagtgg cgcgatctcg gctcattgca 60038142
acctccacct ctcggttca agcagttctc ctgcctcagc ctcccagtg 60038192
gctgggacta taggcgcatg ccaccacacc atgctaattt ttgtattttc 60038242
agtaaagatg gggtttttcc atgttggcca ggctggtctc aaacgcctga 60038292
cctcaggtga tccacctgcc tcagtctccc aaagtgctgg gattgcaggg 60038342
gtgagccact gcacctggcc tgttctatth cttttctctc agtttattgt 60038392
cttccccttg gttgtggaga cagacaggac cctgggctgt ggggagcgag 60038442
aaagctgacg ttctgtctct ggcagcagcc aggtcctggc cacactgtca 60038492
ggggcagacc ggtttttcag tgggtgacac caggaagatg atgttgcctc 60038542
tgtgtgaaaa tcagcagcag ttcttggaag aacagtgttg gccagattta 60038592
aagagagaga gagagacaca tggatctttt aatgccataa acaaaaaagc 60038642
ccgatctttg ctctcctgta agagtcaaaa ccgtagccta gtctgttttt 60038692
catcatcttt tatttctcta gcactaaacc atctagggat ggagaaaagg 60038742
aataaaaagt gtgtcatcaa ctaagtgggtg ttaatttgca aaaagtttac 60038792
actgcttttt ctgtcttcgt ctgggtctta gccatgcaaa acatccgtag 60038842

agagtctgcc cgtggtcgc gccagcaagc gggccaaatt aattttcgcc 60038892
tgaggagagg cagcagccag attgattttg gaggctgtgc tattctctcc 60038942
acaattactt ctccatgaac aggccctatg gtttctggtc aaaatagtac 60038992
tttctcattc ttgctttttc atgtagtttt ttaaaaagtc acaatttacg 60039042
ttctataaaa tgcgtgaaag aggctggagc ttcggtgagc agtcctacag 60039092
aggccctatc ccatgggtccc ctcaaagccc ctgtgctctc aggactgtgc 60039142
tgatgtgaca tttgtttaag ggttttttgg atttttatat gagaggattt 60039192
tttgtttggt tttacttaca atcacatcaa atagtctctgg agaaatgaca 60039242
gtgactgggg acttttcctt tagggaagag tatctcctgt cccagcatct 60039292
ttgtgaggag aatgattatt tttcagacag ctccacaagt gtagacaact 60039342
ttaaaaatca tgatacccag tgctgttaag gctatgttag ccatgttata 60039392
agtcctaaga agcaaggaga atgattagca aagatcagtg aagggggaag 60039442
catacttctg gttatgtctt aaataacccat gccttaattt aggtctgaag 60039492
ttacgcctaa tcctgatgac gtgatggttg ccttggttac aagccctctc 60039542
acctggagat tggcgcattc tcaactgtgcc cctagagagt tatttcatgc 60039592
gaaagaaacc ataactgctt atgattaatg tgtctgttgt tggctggtgg 60039642
cttggttttg gctcctgaag ccactcgta gtctatcact tctgagctgg 60039692
agaaagtgg ggtggtcttt tttttttttt atcttttaaa aatcattttg 60039742
ctttttaatt atttcaactt ttatcttaga ttcagggtac atgtgcaggt 60039792
ttgtacctgg gtatattgta tgatgctgag ttttggggta tgactgatct 60039842
cgtcatccag gcagtgagca cagtatcttc aatccttggt tctctccctc 60039892
tctcccctgc ctagttagaa gtgcccagtg tctattggtg ccttctttat 60039942
gtccatgaat acccagtggt tagcttccac ttataagtga gaacacgcag 60039992
tgtttggttt tctgtttctg tactaattta cataggataa tggcctccaa 60040042
ctgcatccat gttgctgcag aggacatgat ttccttcttt ttctatggct 60040092
gcaaacaatt cttgatgaac acagaatacc tatttgtttt tcaattaatt 60040142
tattgaaggt ccaatttatt gaaggtccac tgagccacag agccttgaaa 60040192
aagcctgaaa aacaagtagg gattaatgcc agggagtgga ccgtgtgaaa 60040242

aggtatcaat catttgagaa atccaggcct tccacagtct gccccatccc 60040292
tgacctgcgg cctgttggtt gtaatgaatc ttgggggtctt tctcaccagc 60040342
ctggataatc tcacacccta tcaacacccc agctctaggc agccacaacc 60040392
agttagtggg aatcctggct ggggtgcagtg gctcacgcct ataatcccag 60040442
cactttggga ggctgaggty ggcggatcac tttaggtcag gagttcaaga 60040492
ccatcctgac caacatgggg aaaccccatc tctactaaaa ataaaaaaaa 60040542
ttagctgggc atggtggcat gcgcctggaa tcccagctac ttgagaagct 60040592
gaggcaggag aattgcttga gtcagggagg tggaggatgat ctgagatctt 60040642
gccactgcac tccagcctgg gcggcagagc aagactctgt ctcaaaaaaa 60040692
aaaagaaaga aaagaaaaaa gggaaattctc atagcctaata ctttctagta 60040742
tctcaatatg ttaagtgaat ggatgcttat aactcattc attcatccat 60040792
tcaggaataa atagatgaac atgagaccac tgtatcctgt ttgttcccc 60040842
aagtcactct cagcctccta gttctttggt ctgctctagg gagctggaga 60040892
aggaggggga tggaagggcc ggcactggct gccctgggct cacctagtgt 60040942
cctgggcaga ggaggcagaa gtgacagagc acaggtgagc tggttcatcc 60040992
tagcattata gactctccaa ggccatcacc tgggagccag gaacacggga 60041042
cagtgaagac ctgcctgacc cctcatcctc ctctgtcctc agtctccgtc 60041092
cctggtccca ctctctcttg aaatgactgt tgttgatcat ccatttccat 60041142
tctgagagta cagaagattt tcctatccaa acttacctcc cctcctttct 60041192
tcccctccag cagcggacag ctttctatct ctttcttcac actcttgta 60041242
gaatgccgtt caccaccttg catttcactt tcagctaaat ctcgtaaggg 60041292
cagatactgg ttcatggcc ctgaatcttg aagttaatat agatatttca 60041342
taatttggtt atctggtgat aatattcagc tttcattgct gtaaaacatc 60041392
aatgcactat ttcaaaatat acaaaaaatg tggtcactgt gtgtactctg 60041442
cttcatttcg tcctgtctcc cttctttctg cactgatagg gctcattttg 60041492
gaaggctttg gtctgtaaga ctttctaagt aattttcaag catgattcag 60041542
aatggaacta ttaaatactg tttcccttcc cttacatca cataccagt 60041592
ttcttctaaa tgccctgaaac agaacttaca tttccataaa aaggaaaatc 60041642

acatgagaag catatgggtt aaatataaaa taagtttttt aaaaaattcc 60041692
aaaagaacct aatgtagcct gggtagtttg agtgtatttg tgtatatttt 60041742
tagttctctt ccttgggaaga aaatctacat tacaatttgg tggattattt 60041792
tggcatagtt cttgtgattt aatattcatg tgtaggcat tttaaacaac 60041842
ataataagct tttgagaaga aaggtagca ttgtcttgct taaaaatgta 60041892
aattctgtca gggatttgtt tcttagaact aagtttggtt tttctgcctg 60041942
agaaatgcag attccacgga gcctgctatg tcaagcatgg acaaagtaga 60041992
agcatcattc tgattatgat gggaaacatc actgattcat tgtttctggt 60042042
gacttacttg ctatttttaa cactctcaag ttacctgaac atttttctgg 60042092
ttaagtcaca ttaaataatta atgttaagtc aactaatcca ttcttttttt 60042142
ttaagttttt tttgagacag ggtttggctc tattaccag gctggagagc 60042192
agtggcacga tcttggctca ttgcagcctc cgtccccag gctcaatcca 60042242
tcctcccatc tcagcctccc gagtagctgg gacaacaggc ctgtaccacc 60042292
acaccctgct aatttttggg tgtgtgtttt ttttttttta gagactgagt 60042342
ttcgtcatgc tgcccaggct agtctcgaac tcctgagctc aaacggatcc 60042392
acacacctag gcctcccaag gtgtatagtc ccagccactc aggaggctga 60042442
gggggggagga cagccaagcc caggaggctc ggactgcagt gagctgtggt 60042492
cacgccactg cactccagcc tgagcgatta agcaagacct tttctcaaag 60042542
aaacaaaaac aaatgtctga ttatgaagct tgtaccctaa cccactgcac 60042592
tgtctgggat tacaggtgtg accctctgca ccctgccaac taatccatct 60042642
taactgttgg aaacacttcc aaattcccat atttaataaa aatccccatg 60042692
tcattctggc tttcaaatca tacttttggg tagccttcaa atttcatcag 60042742
tcatattgtg ttcagggacc tgtaagattg gttcgatagc ctgaaggtta 60042792
cagttttgtc agtgatatta tagacgtagt tcactgggtg ctgagtggtt 60042842
tgtgtgtatt atcttcttat tcctcacaga aattctatgg gacaagttcc 60042892
tcgcccagga tcatacagct agtaagcgac aaagccatgg ttcaagtatc 60042942
tgattgcagg ccagggcaca gtggctccca cctgtaacct cagcactttg 60042992
ggaagccaag gtgggaggat ctcttgaacc caggagttca ggaccagcct 60043042

gggcaacata gacctcttct ctacaaaaat ttaaaaaaaaa ttagccagat 60043092
gtggtagcat gtacctgtag tcccagccac tcgggaggct gaggtgggat 60043142
gatcacctga gcccagaagg tcagggctgc agtgcaacct taaaccaccg 60043192
cactgtctcc tcttaagtca gtgcaagtga tgctgatttc atttatttac 60043242
tgtgtcttgg agaatcctca gtgtgtcaca gaatagggac aagcacagtc 60043292
ctggcatcat tggctactct ggctgagggg gaggcagtag ccaggcctgg 60043342
cctggcccag agggttccac aggagggaca gtaggatgca cagtgcgtga 60043392
tggccccctg gttatgggta gaccctctc ttctgccagt tgtcttggga 60043442
tgttactatt ttcactatca ctttctcttg tggggagagc cttttcttcc 60043492
acatgcttca aactttatct tttttttttt tttttttggc aagcaaaata 60043542
aatgtcaaat aaaggtcaga ggcagcctcg aaggggaaca ctgtcagaaa 60043592
gggatcccga ggagaggagg caagagggga gggacaaggc ctggtttggc 60043642
ttaatggact aacaatgcct ataaaaaacc tctggtcttc atgtttttaa 60043692
tgtagactat tttttagagc agtttttagct tcataggaaa attgaggggc 60043742
aggtacagag atttcctata tacctcctgc cccccacaca tgcacagcct 60043792
ccccactag agtggtagat ttgctgcact tgacgagcgc atattgacac 60043842
attgggggcc actctttgtg ttgtacgttc tatgggtttg gaccaatgta 60043892
tcctggcatg catccacat gatagtctcc tacagggtag tttcactgcc 60043942
ctacaaatcc tctgtgctct actcaccctc tcctctctct gaacttctgg 60043992
caactactga tctttctact gtctccatag tttttcctgg tccagaatgc 60044042
catagagttg gaatcataca ttctatagcc ttttcagatt ggctttgttt 60044092
acttagcatt atgaatctaa gtttcctcca tgtcttttca tggcttgata 60044142
gctcttttct ttttttattt tttcagacgg agtctcattc tgtcaccag 60044192
gctggagtgc agtggcgtga tcttggctca ctgcaggccc cgcctccggg 60044242
ttcatgccat tctcctgcct cagcctcccg agtagctggg actacaggcg 60044292
cctgccacca tgcccagcaa attttttgta tttttttagt agagacgggg 60044342
tttactgtg ttagccaaga tggctccat ctctgacct tgagagtcgc 60044392
ccgcctcggc ctcccaaagt gctgggatta taggcgtgag ccaccgtgcc 60044442

tggccagctc ttttcttttt aacactaaat aatattccat tgtgtggagg 60044492
acatggggga tttgtttatc ctttcattta ctgaaggact cttggctgct 60044542
tccaagtttt ggcaattatg actacagctg ctgtaaacad ctgtgtgcag 60044592
atTTTTgtgt ggacataagt tttcaacttc tttgggtaaa taccaaagag 60044642
tatgattgct ggatcatatg ataactgtat gttcagtttt gtaagaagtc 60044692
atcaaactgt cttccaaagc agctgtaccc ttttgcattc ccactagcca 60044742
agaataagag ttccctgccac ccacccccat gctcgccagc atttggtggt 60044792
gtcagtggtc tggatctgag ccattctaata aggtgtgtag tgggtgtctca 60044842
ctgttgcata aattctcact tccctaataa catatgatgt ggagcatctt 60044892
ttcatatgcc tgtttgccat ctggatatct ttggtgaggt gtctgttaag 60044942
gccttgggtc cattttttaa tcgggttatt tgttttctta ttgttgagtt 60044992
ttaagagtcc cttgtttatt ttgggaaata gtcctttgtc agatgtggct 60045042
tttgagata ttttcttcca gtctgcggct tgtttcttca ttctcttaag 60045092
cctcggatct ttttaggcca tcttgggtaa gcctcatctg aaccatccct 60045142
ccccttttca tactccctta ctagccacca gcaagggaga ggtccctgct 60045192
aactgcagag gtccccgttg agtttctagg cattcagtgga gaagagttac 60045242
cctcctggga tacgtatcaa ctgcagaaac catgagaacc atgttgaaaa 60045292
ggagaccacc agcaccacc tgattataca gctgccaaaca tggtgacctt 60045342
ttgatgtcac catcgcagat cagatgtgag ctctctgatg tgaacaacta 60045392
atctgttctg caatacagaa agcaaagtgt aaggaattct tacttttagc 60045442
aaggacagtt caggactgag gtatctatta gataaggata ttaccaacta 60045492
attctaagcc ttgatctact ctcatgctac attcaactca cagcagactt 60045542
gctgtgatgag aatgagact gtgggggttta atgtagaatt atatagatga 60045592
gtgttgtaac cgaagacaat catatgattg aggacttcgg cagagcaaac 60045642
agaagtgggt tagatttcca gagaaagtgc cctttcagtc ttaagacgc 60045692
attgagatcc tctaacaaga cagggatgga aagataatac tactcttcag 60045742
tgtatttcat gaatctctgt gtccttggga gttccgtgag cacggatatt 60045792
actttctggg aggaggaatg ccaccattgc acctgtgact gactctttgc 60045842

tatttcccta gcattttcaa atctatcatc ttgtttgacc cttatgctat 60045892
cctgctgaat attcatgtgc tcatttgttc atttatttaa caaatgtgta 60045942
ttattaatat ttgcttgctc tacgcagttg cacactgccca ggccagcaca 60045992
gcttgataca gattgggaga gttaggtggt ttgttccaaa ttctcaccac 60046042
tagtgagagc caagtctcag gacaagaccc aagagcttct agactcctat 60046092
tctctgcccc acatttctgc ccctcctgaa ttcaggcagc cattaatgcc 60046142
tccatccctc tagctaccac ttattcacct ctgctcttca gagactgaaa 60046192
caccacaatg acattgatgt cattagattg ctttccggtg aatctggatt 60046242
atgacgtgcc atggaaaaag aaggctgttt ggcagttttc atccttgaac 60046292
agtgtcagtc ggtaaagggg aaaaaacca atcacagaaa cctggcgtgc 60046342
tcacgtgcag agcacctgca agctggtggt tgtgatgcag ccaacctggc 60046392
ctggagagag ggcttagtca attctgtatg gagagtgtg cttctgttac 60046442
tgttattatt gtagtaggta ctcaatctat ctccactcaa cccacagatt 60046492
aaccacacc cgcccaggaa gctgactgaa gcccatagca cactgattat 60046542
tcacaactct tgggtcactc tggaataccc agacccttct gctgccacct 60046592
gctgaatggc catgttttct aaagtccatg ggtgctccca gttctgtgag 60046642
tgtgagctga tcttgtcatt caaaacatta actattacgt taactggcaa 60046692
gaaaaaatga gtttgataat catgattatt tctatgaaaa ctactgaata 60046742
ctttgggatg attcggggaa tgaattgcta aaaccttttt ggtattgaag 60046792
ttgaggtgaa tgacacaacc gtgaaaggtg gaaggaagaa aactctagaa 60046842
ggctcctgca cttagactgc tttttggcaa gtgacttttg gttctctttc 60046892
cacgttaaag aaccctaaac tagaaattgt aggtaaagca ttcaagatac 60046942
aattggtaca atcagtagac ccattcgcaa aggacaggcc cgttttccat 60046992
cagaaagtgt gtgttttgca gcaaggggtg ggtggcttga acatgagggga 60047042
aacatatcac aggatcagta ttttagaagc ataagtggag agcttctaca 60047092
actcagtttt actgaatatt tagtagagaa aatctgatta gcaaactctt 60047142
ctgtaatatt gaaaaatgtc caactataa gatgtcactt ccgaaaacgg 60047192
tagtgctaga ttagagcctc agtggggaaa gttcccagag taatgctcct 60047242

aagagttgcc cgcgccttca ggactggtga cataactgac atagcccagt 60047292
ggaaaatgaa aaattttccc cttttgcaaa aattaataag aatttcatga 60047342
tgacagcaaa gcatttaacc cagcgtggag ctcttcagag cataagacct 60047392
tgtgctggctg cacaggccca tggcgaccac tctgctgcca cttaagaatt 60047442
gccacgtatt gtgtgattgg cacatcagta taactttttt aaaaaagggt 60047492
tagtctctat cagtttacta tatctcacia gagtcacat gcatggatag 60047542
acttgaccaa tggttgtttt tgcattaat tttaggtttg ttaaagaaac 60047592
acttgaagaa taaacttggt ttagaatctc ctaaactctt ctaggtaact 60047642
gtcctttaca tcttaacggg caggaatttt tttttttttt tttttttgag 60047692
agagtctcac tctgtcgccc aggctggagt gcagtggcat gatctcggct 60047742
cactgcaagc tccgcctcct gggttcacgc cattctcctg cctcagcctc 60047792
ccgagtagct gggactacag gcgcctgcca ccacaccag ctaatttttt 60047842
ttatttttag tagagaccag gtttcaccgt gttaaccagg atggtctcga 60047892
tctcctgacc tctgatcca cccgcctcgg cctcccaaag tactgggatt 60047942
acaggcgtga gccactgcgc ccagccaatg gtcaggaatt taaaggccta 60047992
gtttttgccc ttccacaagc ctcacggcct tccaaaaata atattctttt 60048042
tttttttttt tgagatgggg gtcactctgt caccaggct ggagtgcagt 60048092
ggcatgatca cagatcactg ggcctcagc atctctgggc tcaggatgatc 60048142
ctcccacctc agcctcccaa gtagctgtga ctacaagcgt gtgccaccac 60048192
acccaactaa cttttttgta tttttcatag aggcagggtt tcacatggtt 60048242
gcccaggctg gtctccaact cctgggctta agcattcacc cacttcggcc 60048292
tcccaaatg ccaggattac aggtgtcagc caccgcgctt agttcccaa 60048342
caataatatt cttggttcag tccatgaaac aaaggattct gaaatgttta 60048392
gatattctac ttaggcaaaa gggtttgagg tccatctgaa aaaagaaaac 60048442
aaaaatgaat ataggctcta tagaatattt aggttatcag tatcaaagat 60048492
actgtttgcc atggagcaat ggcatggaat gaaattctca agatgaaaga 60048542
ctttacacia accatagggt ttacctggat tcagactcat cagaggttct 60048592
cacaagaaag aagtaaacia caatggattc atgatgatct gttgaaaaat 60048642

aaaatttaaa atggcagaga aataatata accatgacat aagcagataa 60048692
atcagtgagg aggataaaga agagatgaga acgaattcaa aaccataaat 60048742
ccatcataca gtggctggag atatcctctg tgcagtttta cgtgatactg 60048792
aagagcaaca gaaccagcag gcgatgatgt cgtagtgaga acacctcatg 60048842
atggatggtt ttgcatttaa tctcatctct tctttattct cttcatagac 60048892
ttatctgttt gtgtcatggt gtatattaaa actagaggaa ctaggtcaag 60048942
aataatcata cgactaagca actttaaatt gcttatttta ttaaataaac 60048992
atggtatggt tttaatcaga atagaathtt cattgtatgt gcttttttta 60049042
aaaaattgaa tgtcccattc catgtacttt ttagttttca ctttgacttt 60049092
ttctattaac caagtagtga tttctctagg aggacttaac tgtgttgcta 60049142
cgcctacttc tgttgctgct acggtagaag cctttttatc agcccctggt 60049192
cagcagttgc tgagttactt aaaaatgtca tcttacaagt tcatctctta 60049242
aatathtttt tacttaaaac atatacctta tagttgacac actgattatt 60049292
ttatagtata agtctgtatg tactggctga ttatagtttc ctgagtcctt 60049342
tttttttttt tttttttttt tttgagagag tcttgacttc caccaggct 60049392
gggtgcagtg gcgcatctt gactcactgc aacctccgcc tcctgggttc 60049442
aagcacttct cctacctcag cctcctaagt agctgggatt gcaggtgccc 60049492
accactatgc tgagctactt tttgtathtt tagtagaaac ggggtttcgc 60049542
catattggcc aggctggtct tgaactcctg accccagggtg atctactcgc 60049592
ctcggcctcc caaagtgctg ggattacagg cgtgagccac cgcgcccggc 60049642
ctcctgagcc ctttttacat taaccacacc accttaattt ccagtttcga 60049692
tttcttcaat gtgaaatgag aaattacaga tatttgagag caaaatcctt 60049742
ctggagtttt attathtcct tttcctattc tttttcttcc tttctcactt 60049792
ctctgtggcc ctgggaactg tctcattgtc atathtgtgt tctagaatat 60049842
tttgagtgat aatgtcggtg ctgtgtgttt tgttttggtt ttctgcgggg 60049892
ggagtggaac cagcttgctt ctgtgccgcc attttgaac cagaagtcct 60049942
tcctttttct ttcttttttc ttagtttcct tgcctacacc accacaccag 60049992
ttgaacagtt tgtggtgatt gtttcatttt gtttgtatgt ttgtttgttt 60050042

gtttgtttgt taacttttat ttgggtcctt gcaaagcatt cacttttagtt 60050092
ttcatagaaa catttcccat tttttctcac taatatttca ctgctttacc 60050142
taatatgtaa ttaaatttcc tgatgagttt atctggtgac aacagacttg 60050192
agaagtaact tggtaagtgg tgggagcaga agggcgtaga tacagtgggtg 60050242
agcagaccct cactggagta cgctgcatgc ctggcaatgt gtggagaggg 60050292
ggtggagaag gtgctgggta ggtggtaaac aggaatgcca acgggcctcc 60050342
ctcatgctaa ttgggggttc ttagacaagt cctgccactg cccatcttga 60050392
aggacatccc acacaactgc ccatgggaga aacagcatga ggcacagacc 60050442
tccttccagg actttggatt tgttgctcat acttgaaatc cttgtgtctt 60050492
catgggcttt tccttgtgtt ttggtcttgg cttctctaga ggttaccag 60050542
tgggtcaggg gaaggctcct caaaggaatt tcctacatgc gtatcggat 60050592
tttagtcagg ccatccaaaa catgccttcc aaattcgagg aaaatctcgt 60050642
gtggagtggg aacaaaaact tcattttatt tgtatgaatt attactaagc 60050692
tgagtcacaa tggagaagaa aaaggggtga atcgtgagga gccattttga 60050742
cattcctggc ccctgatcaa atggaaggat tctgtttgtg atgctgagtg 60050792
ttgggggtgtt tctagatctg cttggtttgt ggcactttcc tagaccaaag 60050842
tctaggaat ttctgtcttt aaaatggaag aatcgtaaga gctagcaggt 60050892
tgcctaacat ttgttgact ttgtttgttt ttcaaaaggc ccgttgctga 60050942
aagactggcc acatctagtc accacaaaag caatgatgct agaaccctt 60050992
agggacaaaa cacccttcag agttcagaag ggaaaagtga tttataggac 60051042
tttttttttc tatttttagtt ttgtgaatct gttttgtttc cgggagtaat 60051092
tttaatgtta aggaagtgga ttaatctcta ctgaaagctg agcccacgtg 60051142
gccccatgat cctccagggc tgagttgtta gggaccatga ggaaccaagg 60051192
caccacgggt gatggggcct cagatgtgag tccagagagg agagcagact 60051242
gaggtctcct tccttagctg tgcttgttct gtgttgaaca cacacacaca 60051292
cacacacaca cacacacaca aatacacata cactctctct ctcttttgta 60051342
acatctgaat cttgtctgtg attctgtaat cttggtgtgc tctcttgcca 60051392
gtatcccaga gtcccacctc acaagcaaat ggtaaagcat gagtctgccc 60051442

ctaggcttgc tcgtttctca tctcttctc tcccctcctt ttctgttct 60051492
cctctcctcc tcctcctctt cctctcctcc tccttttctt cccctcctcc 60051542
tttctgttc ctctctctct cctcctcctc ttccccctct ttacctcccc 60051592
tcctcctctc ctctcctctt tcctccccct ctctctcccc cttcttgttc 60051642
ctctctcctt cctcttctc caccctttct ttctctctct cctcctcttc 60051692
ctagccctct cctccccctt cccccctccc tcctccactc cttttcctcc 60051742
tctcttctc tccccgcctc ttctctttac ttcttttgtc ttttttctct 60051792
tccattcctc ttttctctgc cccgccttcc tccgcctcag tgggcctgga 60051842
gggttacagt gtggttcctt gtggcccccg gctgtgggaa tccggggagc 60051892
cgccctccac tccccggaac ctctctctcg gcagaccctg cctccgggag 60051942
ctgactcacc ctccccgtgt tctcccttcc tctccccgca gGAAATGTGA 60051992
CTGGAAACAG TAACTCCACG TTCATCTCCA GCGGGCAGGT GATGAACTTC 60052042 [M540V](#) [F542L](#)
AAGGGCGACA TCATCGTGGT CTACGTCAGC CAGACCTCGC AGGAGGGCGC 60052092 [S55Cfs*121](#)
GGCGGCGGCT GCGGAGCCCA TGGGCCGCC GGTGCAGGAG GAGACCCTGG 60052142 [R568H](#)
CGCGCCGAGA CTCCTTCGCG GGAACGGCC CGCGCTTCCC GGACCCGTGC 60052192
GGCGGCCCCG AGGGCTGCG GGAGCCGGAG AAGGCCTCGA GGCCGGTGCA 60052242
GGAGCAAGGC GGGGCCAAGG CTTGAGCGCC CCCCATGGCT GGGAGCCCGA 60052292 [E610G](#)
AGCTCGGAGC CAGGGCTCGC GAGGGCAGCA CCGCAGCCTC TGCCCCAGCC 60052342
CCGGCCACCC AGGGATCGAT CGGTACAGTC GAGGAAGACC ACCCGGCATT 60052392
CTCTGCCAC TTTGCCTTCC AGGAAATGGG CTTTTCAGGA AGTGAATTGA 60052442
TGAGGACTGT CCCCATGCC ACGGATGCTC AGCAGCCCGC CGCACTGGGG 60052492
CAGATGTCTC CCTGCCACT CCTCAAATC GCAGCAGTAA TTTGTGGCAC 60052542
TATGACAGCT ATTTTTATGA CTATCCTGTT CTGTGGGGGG GGGGGTCTGT 60052592
TTTCCCCCA TATTTGTATT CCTTTTCATA ACTTTTCTTG ATATCTTTCC 60052642
TCCCTCTTTT TTAATGTAAG GTTTTCTCA AAAATTCTCC TAAAGGTGAG 60052692
GGTCTCTTT TTTTCTCTTT TCCTTTTTTT TTTCTTTTTT TGGCAACCTG 60052742
GCTCTGGCCC AGGCTAGAGT GCAGTGGTGC GATTATAGCC CGGTGCAGCC 60052792
TCTAACTCCT GGGCTCAAGC AATCCAAGTG ATCCTCCCAC CTCAACCTTC 60052842

GGAGTAGCTG GGATCACAGC TGCAGGCCAC GCCCAGCTTC CTCCCCCGA 60052892
CTCCCCCCCC AGAGACACGG TCCCACCATG TTACCCAGCC TGGTCTCAA 60052942
CTCCCCAGCT AAAGCAGTCC TCCAGCCTCG GCCTCCCAA GTACTGGGAT 60052992
TACAGGCGTG AGCCCCACG CTGGCCTGCT TTACGTATTT TCTTTTGTGC 60053042
CCCTGCTCAC AGTGTTTT TAGATGGCTTT CCCAGTGTGT GTTCATTGTA 60053092
AACACTTTTG GGAAAGGGCT AAACATGTGA GGCCTGGAGA TAGTTGCTAA 60053142
GTTGCTAGGA ACATGTGGTG GGACTTTCAT ATTCTGAAAA ATGTTCTATA 60053192
TTCTCATTTT TCTAAAAGAA AGAAAAAAGG AAACCCGATT TATTTCTCCT 60053242
GAATCTTTTT AAGTTTGTGT CGTTCCTTAA GCAGAACTAA GCTCAGTATG 60053292
TGACCTTACC CGCTAGGTGG TTAATTTATC CATGCTGGCA GAGGCACTCA 60053342
GGTACTTGGT AAGCAAATTT CTAAAACCTCC AAGTTGCTGC AGCTTGGCAT 60053392
TCTTCTTATT CTAGAGGTCT CTCTGGAAAA GATGGAGAAA ATGAACAGGA 60053442
CATGGGGCTC CTGGAAAGAA AGGGCCCGGG AAGTTCAAGG AAGAATAAAG 60053492
TTGAAATTTT AATTTGCATT TTTTTTGTCT AGATAAGAAT AGCGTGAATA 60053542
GATCCTCTTT TATTCGTAAA TAATCGTGCA TCTGTGGGTT AGCCTTGTAG 60053592
AAGTGAAAA CATTCATTT TCCAATGCAT TTAAATGTAA AGCCAAATCT 60053642
GCATGTTGTG AATTTAAGAA AACTTATTAT CCTAAAGGTG CCTTCTCTT 60053692
GGCATCATCC CGCTTGTGAG AAGCCTAGAG GACGCTCCAG GTGGAAGGAA 60053742
ATCCCCTGGG TGGTTTTATC TTTTGTACC CAGTGAGCAC TGGTCCCCG 60053792
CAAATAC'TGG GGAAAAGCAA AAATACACAA GCAAGTTAAA ATTAATTTTG 60053842
CACATCTGGG AGGTTATAAA AGAAAGCACT AATAGTAGTC ACTGCCAGA 60053892
CTTTACTGGC CACAAATGCC CAGCTGAAGA GCATGACTGT GGATCACTGG 60053942
TTTTTCCCTC CTGCTGGAAA TGCTGGGGTG GTAGCGGTCG ATTAGGATTT 60053992
TCAGTGGAGA AGCACAGGAC AGTTCTGTAA TTTATGGGAC TCCTTAGCCA 60054042
ACATAAAGAA CTGCAGGAAA TAAC'TGCACA GCCAGGAGGA TCCGTTGGTG 60054092
GGAATTTACC GTCATTCTG CCCTTTTATT TAACATCATC CACAGAGAGA 60054142
TGTTATACAA ATGGAGGAAA CCATTATACC TTTTGATATG GAATATATTA 60054192
CAGAGTTACA GTTCACAAAG TAGAATGCTG AGCTGAAAAC CCGAGTTTCT 60054242

GCTGTGACTG TCATCTCACT GAGCACTTCG CTTTTCTTTG CTTTTATTTT 60054292
TTCCCTTCTAT AAAAAGGCAA TAATGATAAT TTATAATAGT TTCCCTACCC 60054342
AGAGATATTA GAAGTATGCT ACAGTGAATG TTAAAGTACC TTGAGATCCT 60054392
TAAATCAAAG GTGCTATATA CATAAGTAAG ACTCTACTTT CAGAAAAAGG 60054442
TAATATTATT TCCTGCACTG ATCCCTACTA ATTCTATATT GATCCAAAGG 60054492
CAACTCAATG CTAAAAAATG TATAGAAAAT ATAAGTCTGT GTCTGTGTAC 60054542
TGTAGAGATG TATGTGACAA GTGTAAACAA AATGAACTGA AGCAGTAATG 60054592
AACAGTTATT AGGGGGAACA TGATAAAGAG ATTATATTAA GCTTATGTTT 60054642
CACCATAAAA TCCTTTTTTAT GGCTTACTAA AACCGAGCTC ACTGTAAAAAT 60054692
CATGATCCAA CTTATTGCTA ATCTTTATGA TATGCTTATT CCTAATCTTT 60054742
ATGGTATGGT GTCAACCGTT CATTGTATC TTATTGCTCA TTCCCTGGAC 60054792
CACAGACTAG GGACAGAAAA TACTTGCTTT AATAATATAT ATGCTGTTGA 60054842
TTTCACAAAA ATTTATTAAA ATACAGCCTG GGTACCCAGT GAAAGAGCTG 60054892
AAATGGAAAT GGAGTATCAT GTTTCCTACT CACATTTTAC TCAGCTGTCG 60054942
GAAGGAAGAA TGAATTTCTC AAGAGCAGTT TGAATGTGTT AGATCAGAAC 60054992
CTTCATGTGG TGGGGAAAAT GGGATTATTT CAGTGTAACA AACCACCCAA 60055042
AGACTTAGTG GCTTAAAATA GTCACCATTG GCCAGGCACA GCGGTTCATG 60055092
CCTCCCAGTG CTTTGGGAGG CCAAGGCAGG AGGATCACTT GAGGACAGTA 60055142
GTTAGAGATC AAACCTGGGCA ATGGAGTGAG ACCTCGTCTC TACAAAAAAT 60055192
ACAAAAC'TTA TCTGGGCACG GTGGTGTGCA CCTGCAGTCC TGGCTACTCA 60055242
GGAGGCTGAG GCAGGAGGAT GCTTGAGTCC AGGAGTTCAA GGTTACTGTG 60055292
AGCTTTGATT GGGTCAGTGC ACTCCAGTGT AAAAAACAA AAATAAAAAAC 60055342
CACCAC'TTAT TTAGCTCCCA ATCTATGGG TTGGATCAGC TTGGGTGGTT 60055392
CTTCAGGCCT GGTCCCTCCT GGCCTGGTTT GCTTACCCAT TTACAATGAC 60055442
CCGGCTAGTT GGCCGGGCCA GGCTGTGTGC TCTCCACCTG TCTCCCATCC 60055492
TTCCAGCCAC CTAGCTGGGC ATGCTCTCAT GGTGGTGTGCG AGCCTGAGAA 60055542
CAAGCAGAAA CCTGCCAGGC TTCTTGAGGC CTAGGCTCTA ACTGGCATGC 60055592
GTCACTTCT GCCACATTCT GTGGGCCAAA GCAGGTCACA AAGGCAGCCC 60055642

AGATCCAAGG GATGGGGGAG CAGCATATCC CCCCATGGGA AGAGTTGCGG 60055692
AATGAGAGGG TAGGGGGTGG ACACACAGAG GGGGAAGATGG CCCCCTTGCC 60055742
ATCTGTCCAC CACAGGGCAC TGC GTGGAGT AAAATGCTGC AGAGAAGAGT 60055792
GCATTCTGGG AAAAAAAGAG GAACATATCC CAGCCCCATA CCAGTGAGTA 60055842
GCTCCTTCTC TGGTGATTGA ATTCCCTTAA TGCACAGCAC TATAGATTCC 60055892
CACAAATGAAA GGGACACCCA CGTTCATATT TAAGTGCTGT GTCAAAAATC 60055942
TTTCCAGAGC CAAATATAGG TGATTTGGGA ATTGAGCCTA CTGTACTGCT 60055992
TCCACATTC TTTGGCACAG AAAACTGAAA AGTCACAAC TCTAAAATCA 60056042
AGAAAAC TGG TGAGATACCT TGGGGTAGAG AAACCTGCAT ATAAACAGAT 60056092
AAAAGATCGA GTGTTACCC TTCACCTCAG CTCAACAAAC AAACCTTGT 60056142
TACGATTATA CAAGGGTGAG CTTGAGCAA GGTGCTGTCT TTGGTGGAAG 60056192
AAACGTAGTT TTGAGTTGTT TGCTCTTTGA CAGTCTCTGA TGGCATGTGA 60056242
GTCTGGTGCA TTGCTGTGGG CTGCGCTGGG CACAAGTTGC ATAACCCGCT 60056292
TTTGGAAGAG GAGACAAAGC ATCAAAGCC CTAAACTC TGTGGTGAA 60056342
TCATCATGTT TATTGAGTGT GCTTTTAGTG GCAGGGCCCT GAGCACCTGG 60056392
GAAAGGAGAT GAGGAGCGCT GGAGGGTTCG GAGCAGAGAA GACGAGACAA 60056442
TGCTCTGCTC CAAGCGCCAG AGGAGGCTTC TGGGAAGGGG CTGTCTGTGG 60056492
AATTTCTGAC CCCAGAGCC CTGCTGGTGA AGTCTTGCAA CCACTAAAGC 60056542
TTTGCCAGAG AAGAGGAGGG ACCTGACACT GGGCAGTGGC GGTGCCAGCA 60056592
GTGAGCACAG GCGGGTCTA GGTGGGATCA CTGAAGCCAA GCCAAGTGGT 60056642
GCAGGGGGAG CCGCCCTGGA CCAACACCC CATGGCTGCC CCACTGCGGA 60056692
ACTGCC TACT GCGGCAAAAC AATCCTATGT CCCCAGGT TTCAACAAAG 60056742
AGGAGGACCG AATAAATGTC CCAGTGGGA GGCACACCCA CAAGACTTGC 60056792
TGCTCCTCCT GACCCACCCG CATGGCTCTG CACAGCTGTG AGTCCAGTTT 60056842
TCTCTCTCC TACCTCCCTC TTACCCAGTT ATCCTGACCC CAGGGTGAGG 60056892
TTGAAACTCA TGCTAGGCTA ACATCTCTTT CCTTCATCCC ATTCATAAAA 60056942
CTGGCATACA GGAATGTTTT AAAAAATCT TTAAGATTAC CAGGAGTATA 60056992
AAAGTTAAAA TGACAAAATT ACAGGCCTGT TACCAGATCT TCGTACTAAC 60057042

CAAGGAGCTG GTGACACTAC CCTCTTCCCT GTGTGATAGA AAATGCAGAC 60057092
GTTTTGCAGG CAGACCTGGT TCATGACTCA GCGCTGTGAC TTGTGGACTT 60057142
ATCTTGTGCA GCTACATCAC TTCTTAGCCT TGTTCCTAAC ATGCGTAAGC 60057192
AGAAGGTACT AATATTAGTC TTTAGGGCTG GTTTGAGGAT GACGTGAGAT 60057242
GAGAGACAAC CAAGCACTCA CTGGCAGTTC CTAGAAGATT CCAGTAGTAG 60057292
AGATCTGACT GTCCTACACT ACTTCCCTC CCTGTCTCTG ACACTTGTTT 60057342
ATTCTTGGGC TCAGGAGCCA TCTCAGTCAT CATGTCGGAC CACGTAACTA 60057392
TAACCAAGCT CTGCTGCCCA CCTGGGACAC CTTCCCACTC TTTGCAACTA 60057442
GGTCGGAGGG ACGCACCTTC TCCACAGTTG ACAGGACTGT TATGGTTGAC 60057492
CCAAAAGTTG TCATCTTCTG ACATGACACA CTGAGGGAAG TAGACTTACC 60057542
CAATATAACT TCACATTATA CTGTCTTAAA AGACTATGAT TAAAATGGGC 60057592
ATCAGTGTAG GCAACATGTA GGGCGCAAAG AATAGCCAGA TGTGAAGGTT 60057642
GAAAGGCTAT GTGGGCTAGT TTGTCATGGT ATTCTTGGTG CCTCTCCCCG 60057692
TTTGGGAAGA ATAACACATT GACCACCGGC TCAGAGGAGG TGGCATTATA 60057742
GGTCCAGGCC CCTTCAGGAG GGCAC'TGGAG TCAATGAAAG CTTTGTCTCT 60057792
CACCCAGGCT CTTGGTTTCT CACGGGCAGG GGTAGCCCAG GAAACAAAGG 60057842
CTGTATAGAC TTTAAGTCGT GAGAAAAACG ACATTCTTAT GGTGAGGCTC 60057892
TTAGAGACTG TCTCCATTTA AGCAGCAGCA GTAAAACATC TTACCCTAAA 60057942
ATGAAGAAGC AAATCCATTT TTATTGGCTT TTATAGCCTC TCTCTTTCAA 60057992
TGACAAAGAA ACCATTAAAA TGAATGTTTA AAGTTCTTAG AAGAGCTTTC 60058042
TCTAAATATT TACTCTGTCA GTGGAAAAAT AAACATTTTT TACATCGGGT 60058092
CTATTGAGTT TGTATATAC AGTAAATTC ACCCTTTTTA GATATATAGT 60058142
TTTATGAGTT TTAACAAAAA TACATAGTTG TGTAACCACC ACCATCACAA 60058192
TCAAGATATA GAATATTTCA ACATCCCAA GTTCCCATT CCCTTTTCAG 60058242
TCAATCCCTT CCCCACTACC CCTAGCCCCT GGCAACCATT ATCTGTTCTC 60058292
TCTTCCATA GTTTCACCTT TTCCAATTTG TCGTGTAGAG TTACACAGCT 60058342
CATAGCCATT TGAGTCTGGC TTCTTTCCAC ATAATGTCCCT TGAGATCCAT 60058392
CGGTGGGTAC ACCAGTAGTT CCATTTTTTT TCTGAGTAGT AGTCCATTGT 60058442

ATGGATGTAC TCGGTTTAT TCACCAACAT ATGGGTCTT TCCTGTTGG 60058492
GGAGATTACA AATAAAGCTA CTATAAAAA c t c g t g t g g a t g t g t g c t t t c 60058542
a c t t a t c t t g a g t a a t a t c c a g g a g t g g g a t t a c g g g a t c g t a t g g t a a 60058592
a t a t c a g t t t a a c t t t t a t a a g a a a c t g c a a a c t g t t t t c t a a a g t g t c t 60058642
g t a c c a t t t t g c a t t c c c a t c a g c a a t g c a t g a g a g t t c t a g t t g c t c c a 60058692
c a t c c t c a c c a g c a t t t g g t a t c a t c a g t t a t t t g c t g g t t t g c t t t a a t 60058742
g c t t g c c a t t c t t a t a g g t g t a t a g t a t c t c a c t g t g g c t t t c t t t t c a g 60058792
t c t g t g a c t g a a t a c c t t c t c g t g t g c t t a t t t g g c t a t c t t t g t c t c t t 60058842
a t t t g a t g a a g t a t g t t c a a a t c t t t t t g c t c a t t t t t t t t c t t t c t t t t t 60058892
g t g a g a t a g g g t c t t g c t c t g t c a c c g a g g c t g g a g t g c a a t g g t g t g a t 60058942
c a c a g c t c a c t g a a g c c t c g a t t t c c c a g g c t c a a a t g a t c c t c c t a c c t 60058992
c a g a c t c c t g g a t a g c t g g g c c t a g a t a t g t g c t a c c g t g c c c a g c t a a c 60059042
t t t t t a a t t t t c t g t a g t g a g a g g g t c t t g c t a t g t c a t c c a g g c t g g t 60059092
t t c a a a t t c c t g a c c t c a a g c a a t c c t c c c a c t c t g g c c t c c a a a g a g c t 60059142
g g g a t t g t t t g t t t t t a a t t g t t t t c t t a t t g a g t t t t t g a a a g t t c t t t a 60059192
t a t a t t c t g g a a a g t g g a a t a a g c a t g t t t a a a g t t t t t a g a g c a t t t c t 60059242
g t a a g t a t c t g t t a t g a t t a g a a a a a a t g a a g a c a t a a t t t t t c a t t t t 60059292
t t a a a a a a t t a t g t t t c a g g a g a t g t a c a c c a g t a g t g t t t a t t c a g a g t 60059342
a c a t t t t t c c a c a t t t a c a c a g t g g g a c t c c a a t g t c a g g g c c a g t t c 60059392
t g a g c t g c c a t g t c c t a g a a t t g t c c t a t a t c c t t a t g g a a t g c a g c a g t 60059442
c a c c c t c c t a g g g g c c a t t c t c c c g t g g a a a c t g a g t t t t g t a a c a c a c 60059492
a t g c t g a t a t a a a t g t g t t t t a t t g g t c g

TNFRSF11A (NC_000018.9, GRCh37) - gDNA - 2024-10-10

