



**ADAM17 (NC\_000002.11, GRCh37) - gDNA - 2025-04-02**

cgtattatgt cctactttta taaactttgg ttgaactaaa taaaacagca 9696910  
acatgtaccc aacgttttta gactgtttta ttcagtacca taaacattca 9696860  
ctaaactata cagagctaaa atcatgcaaa agattgcaaa acaaactgcc 9696810  
ttgggaaatt tccagtctaa gctaaatgga ccaagtatag gattgaattt 9696760  
taagaagttg gtgggaagat tccagctctt gtactcacag gtaaggtcct 9696710  
aggattctat ttgttgaagt gtctgcagac cctctcccta cagcaggggc 9696660  
gtggagcaaa tgtgcattca ggaagtgctt attagtcccc ccaaacctt 9696610  
tttcgtgacg acagacggat ggaggcctca gacgactccg gcagtaggac 9696560  
cctgaaccaa atgcctgagc tgcgctcгаа aggctcgtct cgcaggagct 9696510  
ggcgagtggc acgggcttcg gtggccgggc tcggggctcg gggctcgggg 9696460  
cccggggccg gggggggcgg ggggtccgtg cccagggcac tctgtggctc 9696410  
gattcatgtc cccgccctcc cacctgagca cactgggcag agagcctgcg 9696360  
gcacggggcc agtcgcgct cctcgtccgc cctgggcagg tcgctgggcc 9696310  
ccaggccgct ttctacagct cctttaataa aatggacagc aggggtccta 9696260  
accagacgtg ggcatcaaga caaaggaggc ggccagacgc gcttgagggc 9696210  
ctgctcgcta gctcccgcc cccattccg cggtcacccg gggacagagg 9696160  
ccaggccgga ctgggtggag ttgggactca tacgtctgcg tccaggaagg 9696110  
cgccgggcca gccccagcta gacgtgacgg gcggggccga acacggcagc 9696060  
ggaccagagg cccgcggcgc accggcgtgg ggccggggcaa gcggagcctc 9696010  
ccgggatgcc gcgcggcagc cggcttccgg ctgtgggtgg tgcgggggac 9695960  
**AGCGGCGGCC GGAAGCTGGC TGAGCCGGCC TTTGGTAACG CCACCTGCAC 9695910**  
**TTCTGGGGGC GTCGAGCCTG GCGGTAGAAT CTTCCAGTA GGCGGCGCGG 9695860**

GAGGGAAAAG AGGATTGAGG GGCTAGGCCG GCGGATCCC GTCCTCCCC 9695810  
GATGTGAGCA GTTTTCCGAA ACCCCGTCAG GCGAAGGCTG CCCAGAGAGG 9695760  
TGGAGTCGGT AGCGGGGCCG GGAACATGAG GCAGTCTCTC CTATTCCTGA 9695710  
CCAGCGTGGT TCCTTTCGTG CTGGCGCCGC GACCTCCGGA TGACCCGGGC 9695660  
TTCGGCCCCC ACCAGAGACT CGgtaaagac ccaggggagt tggcttaggc 9695610  
cggcgcctgg agcgcctcgtt tgaggggaaga gcaggggagc tgggtctatc 9695560  
aggtgtttgg gggcggggta ttggcgatgg tggcgcgtcc ctaagttttc 9695510  
agtgtagaag ggggtgtggc tctcggagtt tggggaaaga ataaaggaga 9695460  
tgggcctgtc tctgagtggg aaagggctac tggacgggct ccatgtagtg 9695410  
actgagcgc ctagaggggt ttgctcccta gctttgtgtt cggggaggg 9695360  
gttgggaaag cggtaaggag tagggtggct ggatcttgtt tggagaggg 9695310  
gatgtggtca gggttcttgc cttagtaggg aacaaatcta gtgttgtgtg 9695260  
ttcctaccag agccagaaag gaagggcca aagctccaga attcttctg 9695210  
gtcctcgaag gaggaacta gaatttctgc ttaggaggt acttatgcag 9695160  
taatctcgtt gggaggcgg gactggagtt ggagtcttaa gagttgtgtt 9695110  
tttgcgaaca tcctaagcac gttcttgggtt atttcaattg tagcttattg 9695060  
gaggtgcttg ggagatgggg ggaggcggaa acctggtaag ccaactcgtg 9695010  
atgctgccac tatgaatgct ttccttgcac ttttaaacia agaaattatc 9694960  
aagagtgacg agtttgatga atttagaggc tagaaagtag agggttccta 9694910  
tttcattaga ttttcagag agattggatt ttaaggatgg agatgcatta 9694860  
agggatctga actttgggtg aagtaagttt gcgtgaactt ttagtgtatt 9694810  
ttaaaatcct tttatctttc aaaaattgac gtgtaagata ctttaattag 9694760  
taataaagtg tgaataatg ttttcccagt gtgtgaaatt gtaggcttgc 9694710  
atggtgttac tggttcccaa atttcacat gataccatgt gtagtatttt 9694660  
ttttctttat atttagtggc cagaaattgt aatggattgg tatggatact 9694610  
aaaggtgttg agagtgttat cacttgaaca gctgtcttat gattctttcc 9694560  
gattgaaatg gattacaagt gactaatgaa aggcaaggga tcttgtagg 9694510  
aagtgcctgag aagtggtaag tcagtacaaa ttgaaggaca ttttgaggta 9694460

ggattgtggt taggatggag ggataggga agggcttca ttttaaggat 9694410  
aaatgttagt aaaaagaata aatatgtatt ttgagatatt aaaattatat 9694360  
ttgcaccacc ctgacacaac tgtttcactt atgttattaa tctgttggtc 9694310  
gtaggtaaaa ataagcatga gtcccaagga agcatacagt ttaaagagaa 9694260  
acattacttt ctagatcaat tcataacatt tgcagatcgt aaggtttttt 9694210  
agaccatttt ttttttcaa gacagagtct tgctctgttg cccaggctgg 9694160  
agtgcagtgg cgcgatctca gctcactgca acctccgcct cccgggggtc 9694110  
aagcagttca cctgccttag cctcctgagt agctgggatt acaggcatgt 9694060  
gccaccacgc ccagctaatt tttgtattcc tagtagagac ggggtttcac 9694010  
catgttggtc aggctggtct agaactcttg acctcgtgat ccgcccacct 9693960  
gggcctccct aagtgtggg attacaggca tgaaccaccg ctctggccc 9693910  
atgtgtttgt tttttatttg caaaatgcag accacctgtg ccagaagaat 9693860  
gcatagactt ttcttttttc ttttcttttc tttttctttc tttttttttt 9693810  
tttttgaggc agtgttttgc tcttggtgcc caggctggag tgcaatggcg 9693760  
tcatctcagc tcaccacaac ctccgcctcc cgggttcaag caattctcct 9693710  
gcctcagcct cccaagtagc tgggattaca ggcatgtgcc accacgtccg 9693660  
gctaattttt tgtattttta gtagagatgg ggtttctcca tgttattcag 9693610  
gctggtctcg aactcctgac ctgaggtgat cagcacacct cggcctccca 9693560  
aagtgtggg attaaaggct tgagccacca ggcccggcct cttttttttt 9693510  
ttttaaacga aatatttgaa ggacacacaa gtattatacg tggcattgga 9693460  
aatacaaaga tcagacgata tccatcttca aatggttata gcatagggaa 9693410  
atagacattc atttaggaca cttctaaaac agcatagagg agagtgttag 9693360  
agtacgttat agcaagtgtt atcaccaaat gaatcttaga gatcaagtct 9693310  
agttttcaa taaaggagga ggaaaatgag tctcaggaag atgctgtcag 9693260  
ttgtcaatga tgaacatagg ccttgtgggt atttttcttt tgaagaatga 9693210  
cttttttttt cagtttggtt gacagcttac aatataattt gttacttaac 9693160  
cttaccatta gattgagttg gtcaagacta gcaaatagtt tcatagttga 9693110  
aaaacatgct ttattattta ttttttatgt ttattgtcct acaaatacta 9693060

ctatattgca gtactcaata tcgattaggc atatgacaac atttttctga 9693010  
aaggcaaaaa ataccttaata aatgaagcc tggtttttag agtcctctat 9692960  
gggtcaccaa aatgatttc aattgaactg ttatgaattg cataatttag 9692910  
gaaagttatg agtcatatga gcttagtcat gatgatctct tgttgaagtt 9692860  
gcagctgggg tgtataagtc tcactttgat ttcaaaatcg tttcccttt 9692810  
gtgttacttt taataaaaga ggatgtagtg ggtgggagga aaaaatatag 9692760  
gtcacagatg agggatgaga aagtttgtat ctgaaacatg tattttcaaa 9692710  
tttaccttga ggttattggc atggggattc tccatattgc agtgctgatt 9692660  
tcattattga cagcaccatt ttactcagta ttttgacatc tggctttctc 9692610  
ttttgatggt aattttgctt actggctgca ttcctttgaa acctaaatgc 9692560  
ttaactgcc taactgctcc aaggagatt taatgtaact ctgctttata 9692510  
ttagtctaag agataaacca tatttcaaga gtagaatgga gaggaattaa 9692460  
gcagataatt gtgatgggga aactggagag atccttttga ctttcacagg 9692410  
atctcctaga acattaaata taggtttcct ccaaggccaa ttgtggttga 9692360  
tttttgatc cttcaccatt ttctatttgt gagataataa gtgtatacag 9692310  
ctggaagtgt aatgtgaaga aagtctgaaa aagattgata ggaaaggagg 9692260  
acaggaatgg gcttcattga ggtaacggaa gtgaaatgaa aggcttttca 9692210  
tatatgggtt gagcatccct aatctgaaat gctccaaaat ttgaaacttt 9692160  
ttgaatgctg gcatgacagc acacattacc cctaacacac gattttttca 9692110  
ctgttagtgg tatatTTTTT actgtgtagt acttatgtgt gaataggtat 9692060  
aacaaaacga ttacttattg tagcatgtaa aatcagtcag gaatgatggt 9692010  
gatgccagac aaccacagat tatttatgtg ggtggccgag acagtgacac 9691960  
ctttgctttc gaatgcttcg ttgtacacaa actttttttc atgcaaaaaa 9691910  
agttacttaa aatattggt taggccaggc gcggtggctc atgcctgtaa 9691860  
tcccagcact ttgggaggcc gagctgggtg gatcacgagg tcaggagatc 9691810  
gagaccatcc tggctaacat ggtgaaacct tgtctgtact aaaaatacaa 9691760  
aaaattagcc aggtgtggta gcaggcgcct gtagtcccag ctactcggga 9691710  
ggctgaggca ggagaatggt gtgaacctgg gaggtggagc ttgcagtgag 9691660

ccgagatcgc gccactgcac tccagcctgg gcgacagagc aagactccat 9691610  
ctcaaagtaa gtgaataaat gaaacataaa tgaattttat atttagactt 9691560  
gggtcccac ccgaagatac ct cattatgt atatgcaaat atttcaaaat 9691510  
ttaaaaaatt ctgatgaatg aaacacttct ggtctcaagc attttggata 9691460  
agggatgctc aatctgtatc tctttattta ct cctaaaaat cagccaagga 9691410  
aatgggcatc tctccgttcc ccccttccct tttttttttt tctttgttgt 9691360  
tacatgagtt gtactggttt cacttcattt gacagtgttc tgctaatagac 9691310  
tagacgtgta tctctgacct ggacttgttc tctggagttc atattcagct 9691260  
gccatttgg cacttcaaat ataacatgtc caaaattagt tacctttttt 9691210  
ttttttttga gacagagtct cactgtcacc caggctggag cgcagtggcg 9691160  
caatcttggc ttactgcaac ctccacttcc caggttcaag tgattctcgt 9691110  
gcctcagcct cacgaatagc tgggattaca ggtgtcccc accacgcctg 9691060  
gctaattttt tttttttttt tttttttgta ttttttagtag agatgggggt 9691010  
tcatcatatt ggacaggcct gtgttgaact cctgacctct ggtgatccac 9690960  
ctgcctcagc ctcccaaagt gctgggatta cagacgtgaa cactgcccc 9690910  
agccagttac ctattctttt gattacaaga atgagtagct ggacacagtg 9690860  
gcttacacct atagtcccag cactttggga ggctgaggcc ggcggatgac 9690810  
ttgaggccag gagttcaaga ccagcttgac caacatggtg aaacctgtct 9690760  
ctactaaaaa tacaaaaatt agccaggcgt ggtggtgcgt gcctgtaatc 9690710  
ccagctactg gggagactga ggcaggagaa ttgcttgaac ccgggaggca 9690660  
gaggttgacg tgtgccaaag ttgagccact gcagtgcagc ctgggcagca 9690610  
gagtgagact ccatctcaaa aaaaaaaaaa aaaaaaaaaa agaatgagta 9690560  
tcggatacag gtttagccta ggactaggca gggctgctgg taattgtgga 9690510  
agtagtctca ttgcctaacc tgaacttgc atcctggtta ctggtcttgc 9690460  
tggagagtct tggctcaggt tacgtcccag gtctgttgag gagctcttga 9690410  
tagggaatta gttgaagcag ct cactactct atcctccttt actggtataa 9690360  
atccataaaa ttgtttagtt cccaggctct ggggtccctg gcctagcaga 9690310  
gagcactgct ccctttttct cattccttag tcccaacaac ccgcacctga 9690260

cacttactac acgtggcctg cttccctgtc ctgtgtgttt tggggggtgc 9690210  
tgaagaggaa ggctcctgtg tcttcagcac aaacacaata aacacttcac 9690160  
agcagtactg gctttatgtt ttccatttct gatatcagaa gtaggagcat 9690110  
gacattgata gtgtcatttt gggggaactt ttcgtacttc atgcagcaga 9690060  
gcagtgaaga gtgagctgag tgccttgggg ttctgcagta cactctcaag 9690010  
tagtatttta ggaaaatgca atttgctgaa aaaataaaaag aaattaatgt 9689960  
aaaaaatcca caagctgggc gcggtggctc acgactgtca tctcagcatt 9689910  
ttggaaagct aagggggaag gatcacttga gcccaggagt ttgagaccag 9689860  
gctgggcaac atggcaagac cttgtctcta caaaaaaata gaaacaaaaa 9689810  
ttagccaggt gcggtggcat gtgcctgtgg tcccagccac ccggaggatt 9689760  
gctcatgccc aggaggttga ggctgcagtg agtggtgatt gtgccctgca 9689710  
ctctagcctg agcaacagag cgagaccctg tctcaaaaac aaaacaaaac 9689660  
aaaaaccac acgtttccag aaccttctca tataacactt tatttacatt 9689610  
gttcttaaat acgtgtggga cggttatata catacacta tacttatgtg 9689560  
tatatatgtt gatatacaca caaaattata tacataattt ttgtttgttt 9689510  
gtttttgaga tggagtctca ctctatcacc taggctggag tgcagtggcg 9689460  
tgatctcagc tcactcactg caacctctgc caccgggtt caagcgattc 9689410  
tcctgcctca ggcttctgag tagctgggat tacaggtgcc tgccaccgcg 9689360  
cctggctaata ttttgtattt ttagtagaga ctgggtttta ccatgttggc 9689310  
caggctggtc ttgaaactccc acccttgtga tccaccacc tcggcctccc 9689260  
aaagtgctgg gattacaggt gtgagccact gtgacctgcc atatacataa 9689210  
ttttttaaag tttcacgatt agtttttagct taaaaatgtc agctctgggc 9689160  
ttaatgaaga aatatggat atactttatg tcaatgcatt aaagtgaatg 9689110  
gccataaaag cttatcccag agacaaaaca attcagatat aagagaagtg 9689060  
ggagagtgga aggtttatct aatcttctgt aggcaactcc acagctacaa 9689010  
ccagaaggcc attttgttac aggcctgaaa gccccgtttt ctttttattc 9688960  
ttctttgaaa cctttagaag gaacaaagta ttggctactt tttaccgctg 9688910  
atgtcagtgt taagaatctt gtgataacat agatttactc tccctgctga 9688860

aaatcactat gtggctcatc agtaacacaa ctagacatga tgacttaatg 9688810  
caaaggaagt cctatgtaaa tgagcaatga aattgcaact gtgtataagg 9688760  
aacaaaatag aatatgaaac tccagaatct tttgttttca tttctgtttc 9688710  
tcccaaggct ctatcattca aaactccaga atctttcagc atgcaattgt 9688660  
ctcctgatat cagcccctct cttgttttgt tttctttttt ttttttttaa 9688610  
tcacagtgag ccacaaccta ggagtctttt agtggtttct acttggtttg 9688560  
ctctgcagcc taccagcaga tttcctacat tccggtcttg tccccctcta 9688510  
gccattctc cacactgcag tcataatgaa atttctttct tttttggggg 9688460  
ggatggagtc tcaactctgtc acccagggtg gagtgcagtg gcatgatctc 9688410  
ggctcactgc cacctttgcc tcctgggttc aagcgattct catgcctcag 9688360  
cctccaagt agctgagatt atacgcacct gctaccacgc ccagctaatc 9688310  
ttgtattttt agcagagaca gggttttgcc acgttggcca ggctggtctc 9688260  
taactcctga cctcaagtga tcgcccacct tggctttctc tctctttttt 9688210  
tttttttggg ttttgagaca ggatctggcc tcgttgcccta ggctggagtg 9688160  
cagtggcacg atatcagctc actgcaacct ctgcctcctg agctcaagcc 9688110  
atcctccac ctccagcctcc tgagcagctg ggactgcagg tgtacaccac 9688060  
cacgcctggc taatttttgt atttatttt atttatttt ttggtagaga 9688010  
cggggttttg ctgtgttgcc caagcttgtc ttgaactcct ggggctcaag 9687960  
cgatctaccc atcttggcct cccaagggtg tgggatgaca ggcatgagcc 9687910  
accacagctg gcctataatg aaatttccaa cttacagcta ttgccattat 9687860  
ccaaagccca gaatccctga tttccttcca tagcccttca tggcctgacc 9687810  
agtgcctgac tctccagcct cacacttcat attctctctg tactgctctg 9687760  
cactgtagcc tcattgagtt gctttcacgt ctttaagtgt tgtgttctat 9687710  
tttttggtga attcagcata tgttatgccc ttgacctaaag gcctctcctt 9687660  
tcttttcctt ctctgggggtg ctgcctcatc cttctggtct tcaaaaccgt 9687610  
ttccctggga aaacatcttt gactcagcag gcagggatca tgcccctgct 9687560  
gtgtctgtgc ataactttct gtggctactt ctgtcttggc ctgtgatgta 9687510  
ctttataata attttggctt ttcctccagt gtcacaatac tggaagtctg 9687460

tttctttttc tctgtgttgt atccttagtg cctgaaaggt aggaggttct 9687410  
caataaatat ttgttaaata atcaagtaaa tggagtctgg tggaaaagag 9687360  
aaaaaataag tgtagaatgt gtgtgcaaga aaggaggggt aggggatga 9687310  
aaaagataac aaaagcacat aacaaaacaa caaaaagcaa aaacaacaaa 9687260  
aaatgcagat gacaaaaaag ataacaaaat gatgactgct gtggcaactt 9687210  
gtagaaagta aggaaggtgc tctcattcta gagagaagta ggagccatt 9687160  
gtagtttttt aaagagagaa tatgggctgg gctctgtggc ccacgcctgt 9687110  
aatcccagca ctttgggagg ccgaagtggg tggatcacga ggtcaagaga 9687060  
tcaagaccat cctggccaac acagtgaaac cccttctcta ctaaaaaatac 9687010  
aaaaattagc tggataggtg gtgtgcacct gtagtcccag ctacttggga 9686960  
ggctgagaca ggagaatcgc ttgaaccag gaggcggagg ttgcagtgag 9686910  
ctgagatcac gccactgcat tccagcctgg cgacagagtg agactccatt 9686860  
tcaaaaaaaaa aaaaagaata tggccagaca ctgagctgag atagacagtg 9686810  
cggcagtgtc tggattaac tgtaataaac tctactgtca gaagcaggtg 9686760  
gtttatactt aagtttattg agagaattgg atatggataa gagataaact 9686710  
cttgggaaat ggggagaaat ataaattctg ttgtaaagcc tgtaaaaaat 9686660  
tgagattact agtggttaga attttggag tgaagtgcag tgaatatattg 9686610  
agtacctgag aggttacttg ttagtgaaaa cacaatagca gtagtacgta 9686560  
gctacagttt ggctccaaag gaagaactgt ttttactata gtttgtaatg 9686510  
gcttcagaat cttcaatttg agatatccag ttattaaaag agaatacaat 9686460  
gcagttgaaa tgcattagtt aagtatttta aagtgcttta gcaagctaca 9686410  
tttaaaaagt gcttattata gaaaatatac ccaaaaataac caatgatgtt 9686360  
actgtcttgt gcttattttt tctagaccta tttttataca tagttaagat 9686310  
tatacaatat gaatatttct gaaatctata tttaacatta taacatatgt 9686260  
atttttccat gttctttctt tttttttttt tttgagactg ggtctcatcc 9686210  
tgtcaccag gctggagtgc agtggtgcta tcttggctta ctgcagcctt 9686160  
gacctcctgg gctcaagtga tcctcccgcc tgaaccttct gagtagctga 9686110  
gactacaagc acatgccacc atgcctggct aattttattt ttactttttg 9686060



gagagatgag ggtctcacta ttttgcccag gctggtctcg aactccttgg 9686010  
gtcaagcaat tctctcacct tgacctccca aagtgctggg attacaggag 9685960  
cgagccaccg ccctcagccc catgttctta aaaacctttt gtgaacgaca 9685910  
tttaaaatag ttgcagattt tttcccctgt ctttgggaagt gttacaacat 9685860  
ccaaccattt cacagttact aatttaccat cattctgggt tttgtccttg 9685810  
aaaataaggc aaggctgaat aatgaacatc tttgtggcta aagttttttt 9685760  
ctttactttg agttgttacc ttccttttagc ttagttcagt ggttttttct 9685710  
ttttcttttt tgagatggag tcttgccttg ttgcccaggc tggagagtag 9685660  
tgggtgtgatc tcggctcact gcaacctccg cctcccaggc tcaagcagtt 9685610  
ctcttgccctc agcctaccga gtagctggga ttataggcgt ctgctgccat 9685560  
gccagctaa ttttttgtat ttttagtaga gacagggttt tgccatgttg 9685510  
gccaggctgg tcttgaactc ctgacctcag gtgatccacc cgcctctgcc 9685460  
tctccaagtg ctgggattac aagtgtgagc caccatgccc agccagttca 9685410  
gtgattttca tatttgagtg tgtcagcctt gcctggaagc cttgttaaac 9685360  
acagactatt ggatcccact gggcggattt ctgtttgagc aggtctgagg 9685310  
ggagacctga gcatttgcat ttttaacaaa ttcccagttg atgatgatgc 9685260  
tgctggtttg ggaactacac tttgagaact actgggctat attattgaca 9685210  
atgaaactat aatgttgagg ttaagttcct aagtcagtag gagtgattat 9685160  
gatcttgaat gaaactgagt tcatgtacca acctgtatca gggaaattga 9685110  
agaactaaag gaccatattg catttcagca ctgagaattc gtgcagtttg 9685060  
tgaacatgtg agtgctgata tgtgcaaggt ttttgctgag tattgtgagg 9685010  
caaggatggt gtaatgaata aaaaatagcc ctttttggct ttttttttct 9684960  
tcttttgaga tggagtcttg ctctgtcgcc aggctggagt gcagtgatgt 9684910  
gatctcagct cactgcaact tccgcctccc aggttcaagc gattcttctg 9684860  
cctcagcctc atgagtagct gggactacag gtgcccgcca ccacgcctgg 9684810  
ctaatttttt gtatttttgg agagactggg tttcaccatg tttgccagga 9684760  
tggctccat ctctgacct tgtgatcccc ctgccttggc ctcccaaagt 9684710  
gctgggatta caggcgtgag ccaccgtgcc cagcccggcc ttttttcccc 9684660

cgcttagaga tggagtcttg ctctgtcgcc caggctagag tgtagtggtg 9684610  
caatctcagc tccttgcaac atctgcctcc tgggttcaag cgattctcct 9684560  
gcctcaaact agctgggatt acaggcatgc accaccatgc cgggctaatt 9684510  
ttgtatTTTT agtagagaca gggtttcacc atgttaatca ggctggtctg 9684460  
gaactcctgg cttcagggtga tccttggcct cccaaagtgc tgggattaca 9684410  
ggtgtgagcc accatgcatg gcctcatttg ggaaactttt gatatcagaa 9684360  
tcttaggttt ttcattagag attgtcagat ttccatattc ctctggaagg 9684310  
taaaggccta attgctagca ttctggaagc cagttagggt aggaggtag 9684260  
gagggtaggg tattgggtag aggataaaga aggggtttgg gaaaggtagg 9684210  
gggtgtctct tggcagttgt atggttaaat tgagtTTTT tgatttttag 9684160  
tgatagtgt tttttgggta catgtgat tttgatacct gtgtataata 9684110  
tgtagtgatc aaatcagggt gattgggata cccatcattt gaaacatctt 9684060  
ttctgtgtta ggaatattac aagtcttcta gctgttttga agtatacaat 9684010  
aaattgttaa ctataatttc tgtactgtac tatcaaatat tagaacttac 9683960  
taatcaaact gtatttttgt aacactaacc actttctgtt catctccacc 9683910  
actcccactt cccttctcag cctctggtaa ccaccattct gctgtctacc 9683860  
tccacgagat ccactttttt agcttccaca catgagtaag agtctttctt 9683810  
ttaaactgg ttttgtgagc atatttaaca tcagtagcaa taaacttcta 9683760  
ttttaagctc ctgttgctgt attttgagga ccttctaagt ccattggaag 9683710  
gattttgaat accatagtgt ctgcagtgat agttgttgaa agaaagggaa 9683660  
ggcatcagtg caaatatttt tagacagttt ttaaagagac tcaagtcacc 9683610  
caatttgtct tctaaaaatc ctgattttgg aagaggcagt ggagtttctg 9683560  
ttgataaaaa atgatttata gtttgtgctt ggcacttcct aatggattac 9683510  
atcaggaaag atttattgtc tggcactctc attttaacga tactacaatt 9683460  
gattattagg tttagatgct aatacctttt ttacctttat ttcagAGAAG 9683410  
CTTGATTCTT TGCTCTCAGA CTACGATATT CTCTCTTTAT CTAATATCCA 9683360  
GCAGCATTCG GTAAGAAAAA GAGATCTACA GACTTCAACA CATGTAGAAA 9683310  
CACTACTAAC TTTTTCAGCT TTGAAAAGgt aatttgaatt attcatggaa 9683260

taatgttggg gcactggggg cttggtttgg caaaaacaaa aaagtaaggg 9683210  
tatctactga aatcttggga aattacattt taaagatttg taattaattt 9683160  
ccagtataat gcttattcta aaattcatac tggggctggg tgcagtggct 9683110  
cacgcctata atccgagcac tttggggggc caagacatgt ggattgcttg 9683060  
agctcaggag tttgcccaag ctcagcctgg gcaacatggc aaaaccccg 9683010  
cttactaaa agtacaaaaa ttaggcatgg tgacacgtgc ctgtaatccc 9682960  
agctacttgg gaggctgagg caggagaatc acttgaacca gggaggtgga 9682910  
ggctgcacta gccgagatgg tgccactgca ctccagactg ggcaacagag 9682860  
tgagactctg tctcaaaaaa taaataaata aaataaataa agttcatact 9682810  
gatgagtatt tttaaaaaag taaatagata ttgcagaggt gttaatgatg 9682760  
gtaacgatgt ttagaaaatt ctaacataat ttaaattaat tgaatgctta 9682710  
taaaaccttt tgtttttggt gctactttat aaccatcaat catgtgctaa 9682660  
atattatctt tatatatgaa gagataaaga ttttgttcag gacccacag 9682610  
cctgggtggg agctgggtct agattttact gttctattta tttatttagc 9682560  
taactagtta cttagtttcc aggattcttt aacctgcttc atatttattt 9682510  
atTTTTTaaa acagggtctt gccatgttgc caaggctgat ctggaacttc 9682460  
tgggctcagg tggcttttcc atcttggcct cccaaagtgc tgggattaca 9682410  
ggtgtgagcc accatgcctg gcccaaattt aatattcttt ctacattgag 9682360  
ttcctcttac ttcttagcat aaattgatgg atatgttcta tttcagtagt 9682310  
aattttaata ccacgtattg ttttgcacat tgaaatgta aataattgca 9682260  
ggcctctttt taaagtcttt aggaagcttt attcagtatc aaaaaacaga 9682210  
cacatggaga attgactgaa ttattcttta tttatttatt tttttgagag 9682160  
tcttgctctg tcgtccaggc tggagtgcag ttgtgtgatc ttggctcact 9682110  
gcaacctctg cctcctgggt tcaagcgatt cttgtgcctc agcctctcaa 9682060  
gtagctggga ctacagggtc acagcaccac gcctgggtga tttttgttat 9682010  
ttttagtaga gacagagttt caccatgttg gccaggctgg tcttgaactc 9681960  
ctcacctcaa gtgatccacg atctcggcct cccaaagtgc tgggattaca 9681910  
gacaggggcc actgcatctg gccatcttta ttctttatat aggacaagcc 9681860

ttctcaacta tgttaaaaaa taaaaggaat atgtgctct ggttataaaa 9681810  
acaagccatg gaggatagc aaagttttta cttctaactc agttagactt 9681760  
ctcagacca gagaggtttc ctttgtaaac ttccaatttt ttgttttgtt 9681710  
ttgttttttg ttttttgaga cagagttttt gctcttgcg cccagactgg 9681660  
agtgcaatgg cacgatctta gctcactgaa gcctccacct ctcggttca 9681610  
agcagttctc ctgcctcagc ttcccagta gctgggatta caggagcca 9681560  
ctgccatgct cagctaattt ttgtattttt agtagagatg aggtttcacc 9681510  
atgttgcca ggatggtctt gaactcctga cctcaggatg tccacctgcc 9681460  
tcaggctccc aatgtgatgg gattacaggt gtgagccacc gtgcccgacc 9681410  
caaaatattt taatgcatgt tttttgccta taggtctctg tgtgtgtata 9681360  
ggtgatatag atagcatatt tacctcattt taaacagctg cataaatatt 9681310  
cctattgcat agaattgtaa caacatactg actaatacac tacagatgga 9681260  
tattgtttta ccaaagtgat ttttttaata caacaaacag tgctctagt 9681210  
agtatctttg taaatgtgta ccttgatgag gtgtttttat aggatatatt 9681160  
cctggaagga gaattactgg gtcaaggata tgtatactat gtttattgat 9681110  
attgctcttt cctcccaaag agatttgaca aatttattct tccagcagca 9681060  
atatatgagt ttacctgttt cctgttatct ttgccaatag taggtttatc 9681010  
agcctttaac tgtcaccct ctaaaggga tggcatttta tagttgtttt 9680960  
gattttcatt ttgtgtgaca ttgagcatct ttttatatat ttgtaagtaa 9680910  
tttgtttat atttctgtaa actgcctttt tatctctttt gactattttt 9680860  
ctattgaatt tgtctttcta actactgaat tgtagcagtg cttagtatat 9680810  
taaggagatt ggttcattgt catgtggta ttttaggcaa atttttaatg 9680760  
caaattaatt tttcctagct attgcaatta tccttaggtt attttttaat 9680710  
gacttctttt tattcgattt tatgtcagaa tattatagta ttggttatta 9680660  
gctttcaact tacaccaaatt ttgagcagat tggtaaatatt aatagctaca 9680610  
gttaatcagg tacttatttt ctgtaattta ctggcatttt acataagtta 9680560  
tctctaaaag tgattccttt tttgaaggaa caaaaaaaaaaaa aaaattaagg 9680510  
cttagacagc ttagtaactt gcccaagatt actcagctag taaatgacag 9680460

atacaagatt tgaacaaagg ttggactcca aaacttgtgt tatttctgct 9680410  
atactggtgg agagtttggg gaagaagtgg ataatagtagc aagaaataag 9680360  
taggagcgaa ggaagagtga ggaaactata aatgaaaag aactcaaagt 9680310  
ttagcttttt gggtttcttt ggatttgaag tggcctgtag aatccgtatt 9680260  
ctagaggcaa aaacttccat agccttacat atttctcttt caagtttcgt 9680210  
agatgacatt gattccctaa gaaaatatta aatcgtagcc acttgttatc 9680160  
ttttctctgt gtaagaaagc agggaaagtat gtaatttatt ttacaaagtt 9680110  
tccatactaa atatttaatg ggaaatttat ctaacagtct atggaatttt 9680060  
ataccaggtg ttttaaaata ggttatttcc ttaaatcccc aaaaccgttc 9680010  
agttattagg tgatattatt tccatttcta gataaatact taggattcaa 9679960  
agattgaggc caaggtcggg cagttagtaa atgaaagtag gacttaagcc 9679910  
aagtttgtca gactccaaag cccataccct ttcttttcta tcatattgcy 9679860  
tcattaaagt ttaaaacaag aacaaaaaca aagatagctg aagtaatcag 9679810  
tttgtatcag ggctgaatta actctatgaa acccctcatt acttgatggt 9679760  
aaatgagaag attccgtttt tcgatagcag tggaaggcaa agtaatttaa 9679710  
accaagatca ttgcattaa tttggatgta actattagag gttgaaaaag 9679660  
catagaaaca ctgagagggt gtatgaagag ttgaagtaac ttaagaaaaa 9679610  
aagaaacttg tttaaaattt gccttacaag tttcatttcc tttttgttat 9679560  
aatcaagaa attatcagct aggcgtggtg actcacacat gtaatcccag 9679510  
cactttggga ggccgagctg gatggatcat gaggtcatga ggtcaggaga 9679460  
tcgagaccat cctggctaac acggtgaaac cccgtctcta ctaaaaatac 9679410  
aaaaaattag ccaggcgtgg tagcaggcgc ctgtagtccc agctatttgg 9679360  
gaggctgagg caggggaatg gcgtgaacct aggaggtgga gcttgagtt 9679310  
agccgagatt gcgccactgc actccagcct gggcgacaga gtgagactcc 9679260  
gtctcaaaaa aaaaaaaaaa tcaagaaatt atcttatttt taaataacga 9679210  
aaaagctgcy gagtatatac tgttttgata cttttttgat gttgcctgaa 9679160  
tttttttggg aaaagttaa tgtttctcct aaaagtgaaa tatatcagat 9679110  
tacttgagaa ggtctagaac tgataaagaa atgaaagtga tatacctgac 9679060

taaatggacc attaaaaatg gttagggtaa taatgttaat tcaaactggt 9679010  
tagctggtct ttagttactg taaattctta agtcaaaagt cagaaagata 9678960  
aaacgttaaa gaaatctgta agaaaatgac ttcacataat tttgggagga 9678910  
taaagtaaaa gaaattttga cattctgttg gacgttttat aactcaaaag 9678860  
ctaataattgg aaaatcaaaa aacatgaatt ttataatcgc ttggtcttta 9678810  
tctttagaaa agattcttaa tgtagcaaat gaaaaatgca attccactga 9678760  
tttctttctg aaaagaacat taagtaatgt tgcaactctt agctttaaaa 9678710  
caaaaataata agacatttat aataagtatg cttttgaaag ttctcagcat 9678660  
aactggaggg aaaaatcata actgagaatg tgtgggaaga tatgttttag 9678610  
gatagcagaa gaaaatgttc caaggattta cgaaataatg ttctattgtc 9678560  
ttttcccttt gaccatataa aaaccacaag caaactaaaa ttaccttgtt 9678510  
atgctcaaaa agttaaaaaat atttgttgcc atggagatag tcccagtcta 9678460  
gatttctttc cggtagttaa aagacttttg caatcccatg ggaagtaat 9678410  
atattttcag tacaacagct gacaaaattt gtttctgtgg gtgagatgaa 9678360  
taatatacct ttctttgtct ttggtgttca tggacacatt gaaagactat 9678310  
aaataaact tgagaaagtc ttgctacca ctctagttt tcatgtaagg 9678260  
atggaaagtc atagaaaaca aaaagaatag taagccaatt aaagaactgg 9678210  
actgaaactc aacaaaaaga atagtaagcc cactaaagaa ctgaagtgta 9678160  
taccctcc cctctcctcc cctccctcc cctccctcc cttccctcc 9678110  
cttcccttc cttcccttc tcttccccct ccccttcccc tctcctcccc 9678060  
ctctcctccc ctctcctccc cctctcctcc cctccctcc cctccctcc 9678010  
cctcttttcc tgtcttctgg tgccaatgga gtctatattc taatgtctgt 9677960  
cttagatacc ttgtatttat tttcctaact gtaattgtgg gttacttttt 9677910  
tgcaagatat gttgttttga ggaggaaaaa aagcacgagt actttttttt 9677860  
tttcttattt tgagcgggag tctcgcgctg tcaaccaggc tggcgatctc 9677810  
ggctcacagc aggctccgcc tcccgggttc actccattct cctgcctcag 9677760  
cctccaagt agctgggact ataggcacc gccacatgc ctggctaatt 9677710  
tttgtatttt tagtagagat ggggtttcgc tgtgttagcc aggatggtct 9677660

cgatctcctg acctcgtgat ccgcccagct caacctccca aagtgtctggg 9677610  
attacaggcg tgagccacta cgcacggccg catgagtact tttaaatata 9677560  
gaaagcagca tttattaatt ttgcacagca ataagaattt tctcatagtc 9677510  
caccagcctt gatagagaca gcatagtaca gggttttgaa ataaaccagg 9677460  
tttatttccc agtttcacca tttactagct gtgtaacttt gagtaggttg 9677410  
attagcttcc aagcctcaat ttgtacttgt gtgaagtggg gataatagat 9677360  
gcatagtacc taacaccaag taggtgttca ataaatggta tataatagga 9677310  
ttagtttttg ataataattt ttttagataa tcaggattcc aacttaacta 9677260  
cgcagtcatg tgtgtttcct tattcttcag tgttttccag gagagatgaa 9677210  
tgtataagtt ctttgaatat ctttacccta gtgtgagttt attgtgatct 9677160  
gctgttttta tagctaaata aattagttca tttgtcgtta caggagatat 9677110  
attgctctaa gtacctaata agactttagt tgtaacttgc atagtgtttt 9677060  
attaatgtca atgcttctgg ctttttaaga aagtttaatt atgtgaaaat 9677010  
gagacttaaa atttgtgtgc ttagagtaaa atatgaatgc atttttcttc 9676960  
agGCATTTTA AATTATACCT GACATCAAGT ACTGAACGTT TTTCACAAAA 9676910  
TTTCAAGGTC GTGGTGGTGG ATGGTAAAA CGAAAGCGAG TACACTGTAA 9676860  
AATGGCAGGA CTTCTTCACT GGACACGTGG TTGgttagta tggagcttgt 9676810  
tggtttgccc ctgtgtctgg tgtattaggt ctccaaatct aacttgattg 9676760  
catattcttt tctggtgcag gatagtgggg acggggtgtc atagaagtgc 9676710  
tattctttga cttttctttg aggtatataa gtttagaggc aggaacattc 9676660  
taatagaagg aatgagtat tatctaaatg tcatactagc tggctggttt 9676610  
aatgattaaa attaaattct tcttaagtga taggaattta acctttcttt 9676560  
tcctcagtga ctgtaagctt tctttatgat attttaaaca gggaagcttg 9676510  
gagataaaat acttgggtgat cctattacgt atgtatttga gaaaatttat 9676460  
caaacaagca attgcagttt actttttgac ctttttctgc aatgagaaaa 9676410  
aaaaatgtca ttgaaatcca caaatagtat agttcctagg cctgtacatt 9676360  
ctaaatcatg ctttctgtct ctcttagttc ttcctttacc tagaagtaga 9676310  
taaaattatt ccagaagaaa atcttagcag ttttgtttgt tttgggaaag 9676260

ggataggttt caagtgacta aacttgaggc tacccttag gagttgagat 9676210  
tatctagctt ctttctggag cttttgtttc ttgttttgca gagctctcac 9676160  
agtactaggc aaattccacc ctgaaggatt taatttttat tgagagtaat 9676110  
gcatagtttc ttatttgatg taagtatttt taaataataa tttttttttt 9676060  
ctcttaagGT GAGCCTGACT CTAGGGTTC T AGCCACATA AGAGATGATG 9676010  
ATGTTATAAT CAGAATCAAC ACAGATGGGG CCGAATATAA CATAGAGgta 9675960  
aatattatg tgaatttttt ttcagtagct tatatctctg attttcaaaa 9675910  
agctgctcag ttctgcaaag gtgaaaagta attatactta tttctttcct 9675860  
cttcgtattht gaagtttttt actaggaaa tagacttttt aaaaaaggat 9675810  
aatctctaag aagctgtgtt atgatacacc ctgtatttct aagtaccata 9675760  
attgagagag ttacatgtgg gatggataat aggaagagaa aactttcttt 9675710  
ccctcctgac tcattttttta attctttctc aaataataaa tgtaaaccatc 9675660  
ctcagaaatg aaaagtgaag tattattttt caatttctct gtttttctgc 9675610  
tagacacact ggaaatgcta gatcaatgaa agtggttagt tcatagtctg 9675560  
agaagttaaa gaggaagcta ggaaagtcag gctgtggtca ctcttcatt 9675510  
gaaagagtag caatagaaat caagaccaca gtggctgcat tggttaagac 9675460  
acatatctat ctgtcagata ttagtctaca aaacaaaacg tttcctcata 9675410  
attgtgaatt gaagttgatt ctgtgtttcc tgaaaaatga gaagactctg 9675360  
ggtggtggtg gtgatatcac taaaatagat cacctgtggg aaaactgagt 9675310  
aagattggtc aaaatgaaat gttcaggtgt atttgagtgc ttaatagggg 9675260  
taaaacagtc tgctggagct atataacta tatgttttaa ttatatcaa 9675210  
tctacatgac tgtagtcct ttgactgtcc attattgtga aaaagaaacc 9675160  
tatggccttg cagtatgtha tagtttgtha atgtttaagc tatttaatgt 9675110  
caatgttttg aggagtctgg cctaccagaa agagtcagaa atttagtaga 9675060  
aagtaaagga actaatatta taaatgcatt cattctagaa taggcaaagc 9675010  
atcactggaa tgtcttaaat ttgcctgttc tttcaaatca atttattttt 9674960  
taagaatacc tttattttta aatatatgct cattgcaaaa ttcggaaaat 9674910  
agattatctg tacttgaca gataactact attgacattt tgacagacat 9674860



ccttccaaat ttttttttct atgtgtaaat acacaaataa atatagttat 9674810  
accactatt ttttcctgca aaactaggac catacaatat gtacagtttg 9674760  
tcttcacaca tttttcgttt aacaatatga ttatgaacct tttcgtgtta 9674710  
atatagatct aaattagggg tttgtttggt tgtttgtttg ttttttgaga 9674660  
cggagtcttg ctctgtcacc caggctagag tgcaatggcg tgatcttggc 9674610  
tcactataac ctctgcctcc ccggttcagg cgattctcct gccttagcct 9674560  
cccaagtagc tgggactgca ggtgtgccc atgatgtccg gctaattttt 9674510  
tttctttttt ttgagatgga gtatcactct gtcactcagg ctagagtgca 9674460  
ctggcgtggg ctccggctcac tgcaacctct ggctcctggg ttcaggcggg 9674410  
tctcccgcct tagacccttg agtagctcag actacaggca catgctacct 9674360  
cacctggcta atttttgtat ttttagtaga gacggggttt caccatgttg 9674310  
gccaggatgg tctcgatctc ctgacctcat gatctgccag cctcggcctc 9674260  
tgaaaagtgc tgggattata ggcgtgagcc actgtgcctg gcctcaactg 9674210  
ttttgtttct aacttttgaa ataaaaggta ttgtagtgaa cagccttggg 9674160  
cacacctttt ggtgcatgtg tttagttgga atagtctgga tgataggtaa 9674110  
tagtctggga agttaaataga agaaactgta ggaagctctg tctaggctgt 9674060  
gcgagggcct cagataaact cccatagctg agtagcttaa cacaagcaaa 9674010  
gttttttctt actctcctgt ggcttgatgt gggttagggtg gttctcctct 9673960  
actttgtggc tttgactttt ggacacatgt cctctgtagt tctcacagaa 9673910  
agaaaacaga gctagagaat tatacaggat attaagggcc aggcttgtaa 9673860  
atggccttcc gttcaataca ttctagaaca ctttatctct gacctgctac 9673810  
aaaggagaat ggaaaagata gtcgtaattt gagctcagaa agagaaaata 9673760  
gtgtggtaaa tgcacagcat tgtttttgct gcagtgcata tgtctgctta 9673710  
tttccttaga ataatttatt cttttttggt tttttgagac tgagtctcac 9673660  
tctgttacca ggctggagtg cagtggcgtg atctcagctc actgcagact 9673610  
ctgcctcctg ggttcaagcc attctcctgc ctcagcctcc cgagtagctg 9673560  
ggattacagg tgcgcaccac cacaccagc taatttttgt atttttggta 9673510  
gagacagggt ttcacaatgt tggccaggat ggtctcgatc tcctgacctc 9673460

atgatctgcc agcctcggcc tctgaaagtg ctgagattaa aggcgtgagc 9673410  
cactgtgcct ggccagctta ttaattctta agccaaaata tgtgtcttta 9673360  
ggatccaagt taaatttgct cagattacat tttttttttt ttaagatggc 9673310  
atctcgccct gtcacccaga ctggagtgca atggcgcgat ctcggtcac 9673260  
cacatcctct gcctcccagg ttaaagcgat tctcctgcct cagtcccttg 9673210  
agtagctgga attacaggcg tgtgccacca tgccccgta atttttgtag 9673160  
ttttagtaga gatggggtt cactgtgttg gccaggctgg tcttgaactc 9673110  
ctgacctcgt gatctgcca tcttggcctc ccaaagtgc gagattatag 9673060  
gcatgagcca ccacgccag ctagattact catttttttc aaatacttcc 9673010  
ttttggaaaa ataggaattc tgtttccatc cataccttg tttcactaag 9672960  
tacaaaaatg agtataacta atatttcatt gtaagatatt tacttagcca 9672910  
ggcacagtgg ctcacacttg taatcagcac tttgggaggc tgaggcgggt 9672860  
ggactgcttg agcccaggaa tttgagacca gcccaggcaa tatagggaga 9672810  
ccttgtctct actcctccac aaaaaaaaaa aaaaaaaaaa aattagctgg 9672760  
gcatgggtggc acatgcctgt ggtctcagct acttagaatg ctgaagcagt 9672710  
aggatcagtt gaattcggaa ggcggagact gcagtgagct gagattgtac 9672660  
tgctgcactc cagcctgggt gacagagcga gaccctatct cacacataca 9672610  
cacacacaaa gatgtttact tacaagtata ctcatcagat accttgaggg 9672560  
acttttgcat gaaattaata atgtttattg aaaaaatgat ttactactta 9672510  
caggggtgat tttcactc tttataattc ttttgatact tttatagttc 9672460  
ataagtgtgg tgattggctg ttcacacaca catatgagat gtaccaccct 9672410  
agaaccttgt tacaatgta gcacattacc agtctgacat gaaaaaaaaat 9672360  
aattctttac acttaccttg atgcaaaaac attgtctatc tgcactaata 9672310  
tcttaggaat ataagtgagc aggaaaaaat atatatctta tttttaacac 9672260  
atcatcatta aatattttgt ttatgacagt cttacttgggt cactcaggct 9672210  
gaagtgcagt ggtgccatca tagctcactg cagccttgac ctctgggct 9672160  
caaacaatcc ctcttttctg cctcctgagt agctgggact acaggtgcat 9672110  
gccaccatgc ccaactaatt tgttaaattt ttgtagagtg tatcagattt 9672060

ttgatgaggt ctcaactgtgt tgcccaggct gatctcaaat gtctgactgt 9672010  
aagcaatcct cttgcttggc ctcccaaagt gctgggatta caggtgtgag 9671960  
ccactgtgcg cagccgttaa atattttaaa ccgtcactga ctttaccata 9671910  
gcttactatt tatataaata atcctgggtt aaacttgcag agtgagataa 9671860  
tatttcccc aacttttatt tattttattg agatggagtc ttgctctgtc 9671810  
gcccaggctg gaggcagtg gcgcaatctc ggctcactgc agtctccgcc 9671760  
tcccaggctc aagcatttct cctgcctcag cctcccaagt agctgggatt 9671710  
acaggcacac gccactgtgc ccggctagtt tttatatttt tggtagagac 9671660  
agggttttgc cacgttggcc aggctggtct tgaactcctg gtctcaggtg 9671610  
atccaccgc gtcggcctcc caaggtgctg ggattacagg catgagccac 9671560  
tgcatccggc ctaatttttg tatttttagt agagacgggg tttcaccatg 9671510  
ttagtgaggc tggctctgaa cttctgacct tgtgatctgc ccacctcggc 9671460  
ctcccaaagt gctgggatga cagacgtgag ccaccatgct tggcctcccc 9671410  
cagcttctag ttttaaaaat gttcagctgg tgacgtggct catgcctgtc 9671360  
atcccagcac tttgggaagc tgaggtgggt ggatcacttc aggccaggag 9671310  
ttcgaggcca gcctggccaa catggtgaaa cctcgtctct actaaaaata 9671260  
caaaaattag ccaggcttgg tggcttgcgc ccgtaatccc aactgctcgg 9671210  
gaggcctagg tgggagaatc gcttgaacct gggagacaga ggttgacgtg 9671160  
agctgagatc gctccactgt actccaatgt gggtgacagg gtgaaactct 9671110  
gtctcagaaa aaaataaaaa agaaaatgtg caaatctaca gaaagattaa 9671060  
aaagtaccct gtagttacag aaagattttt ttaaaaaata ccctgtagcc 9671010  
cttaaacaat ttctaacata atgtcctggt agctttctct ctttttttcg 9670960  
tgaatcatat gaaaatcatt tgcaaacatc atgacccttc acccctaaat 9670910  
acttctgtat gcatccttag gaataaaggc actcttttct atagctgtaa 9670860  
taaaagtaac atacctgaga aaatgacaag aattctacaa tattatctaa 9670810  
taatcatgcc atagtcaaaa tctctagtca tcctcaaaaat ctcttttcta 9670760  
gatttttttt ggttttccag tccaggatcc aatccagttt tctgcctttt 9670710  
agtcaattac tcatcaaatt attttttcca gcaacttact agtaataatg 9670660

gtaatagcct tagcttttat taataacaac cacttttctt ttgaaatggt 9670610  
aatataaaac tagattttatt acctacataa tcttcataat cttcaagtta 9670560  
ggattatca ctactttacc taatgagggg ggttatgctc agggacttg 9670510  
tccaaggcac atagtgaggt atggttgagg tttgaactca gatatatctg 9670460  
atcccaaagc cagctgtctt tttctgtgct ggactgacta tactaggaaa 9670410  
caatcaatgt gaacttagaa atgtttgacc caaaagaaaa aaaatttcac 9670360  
tcctattcat aggctaaatg aactttacta aatatggaag attcctgtag 9670310  
cccggaagtt gggttagtta acttttgaga tctctgcaa ccctgaaatt 9670260  
ctgtaaccct tgtttcttac atctgcctca tacatggatt accaaagatg 9670210  
tatatgcata taatatttaa cagttttatt gagataaaat tcacatacta 9670160  
tattattcac ccacttaatg tatacaatth tgtagttttg tgtgtgtgtg 9670110  
tgtgtgtgtg tatttttgag atggagtctc actctgtcac ccaggctgga 9670060  
gtgcagtggc acgatcactg caacctctgc ctctgggtt caagtgattc 9670010  
tgtggcctca gcctgttgag tagctgggat tacaggcgcc caccacatg 9669960  
cccggctgat ttttgtgttt cagtagagat ggggtttcac cgtgttggtc 9669910  
aggctgttct cgaactcctg gactcaagtt atctgcccac catggcctcc 9669860  
ccaaagtgct gagattacag gcgtgagcca tcgcgcccgg cagttttcgt 9669810  
atattgatgg agttgtgcaa acaccacctc attcaattht agaacattht 9669760  
tatcacctga aaaagaaacg ctgtatcctt tagccatact tccccttcc 9669710  
tccctaactc cccagctct aggcaaccag ggatctactg tctatttaga 9669660  
tttgtctgtt tgggtcatct catataaatg gaattacata acatgtcttt 9669610  
tgtgtgtggc ttcaattht ttatthttht gagatggagt cttgctctgt 9669560  
caccaggct ggagtgcagt ggcattgatct cagctcactg caactthtgc 9669510  
ctctgggtt caactgattc tcttgctca gcctcccagg tagctgggat 9669460  
tacaggctcc tgccacatg cctgactaat ttttgtatth ttactagag 9669410  
tcgggtttc actatgttg ccaggctgtt ctcaaactcc tgacctcaag 9669360  
tgatccacct gcctcggcct cccgaagtgc tgggattaaa gacatgagcc 9669310  
accacgcca gcctgtgtgt ggcttcttc acttagaata atgtttcaa 9669260

ggttcatctg tgtttagca tgtatctgta tcttatttat ttttattgct 9669210  
gaatagtatt ccattgtatg gataaactgc attttgttta ttcattgatt 9669160  
agttgttgat ggacatttgg gttgtttcca ctttttagct atatttacat 9669110  
tactgcttgt gttttcattt ctcttggta tatactagga gcagaattgc 9669060  
tggtcatat ggtacttcta cttttaacct ttgaggacct gccagactgt 9669010  
tttctaaagt ggttttacca ttttacattc tcatcagcat atgtgagggt 9668960  
tctggatttc tctacatcct caccagtatt tgtctttgat catagtcac 9668910  
ctagtgggta tacaggggtg tctcattgtg ggggtttttt tccccattgg 9668860  
ggttttgatt tgcatttccc tgatggagat aaatatattt tttgtgtgtc 9668810  
ccccacaaa ctgcctggtt ctgatgagac cagtgttctt acagagaata 9668760  
actttgcttt gaaacaaaac aaacaaacag ctttttgact tgggtaacct 9668710  
ttggagtatg ttaattgtga tttactctgg ccttgaaca ttgtaagtgg 9668660  
agattttggt taaaaactgc gttcgctgaa acaagtaata aggttcagac 9668610  
ctattgttac aagttctgag ttttcttca tataaatatg tttgttcttt 9668560  
tgtgtggata aaacctaacg tggcaaaaag gtgtcaaaca cctaagtatt 9668510  
aaggaaacta aatgaaaat gctgcatgaa cagaaacctt gtccaatttt 9668460  
cattactata gcaccatcac ctataacagt gccagtgtac agtagatatt 9668410  
acataatatt tttgaatgaa tgagtggaaa atgatatgca tttttctctt 9668360  
ctgcatcctc tgaaagattt cacaacgtgc aaagtatgta aggctttatt 9668310  
tatatacaga taaaataatc agagtttata atctatgtat ttactttcct 9668260  
gcatagaaac tccatgatg taaaaattga gattatttat ttttaataaca 9668210  
tgactaatca gtttacttaa cctagaaatg aatgttatct aagaacaagc 9668160  
aaagaatggt agaagaattt agtgtttagg aattattatt gttttccatc 9668110  
tcagtcgtat atattttctg ttttagCCAC TTTGGAGATT TGTTAATGAT 9668060  
ACCAAAGACA AAAGAATGTT AGTTTATAAA TCTGAAGATA TCAAGAATGT 9668010  
TTCACGTTTG CAGTCTCCAA AAGTGTGTGG TTATTTAAAA GTGGATAATG 9667960  
AAGAGTTGCT CCCAAAAGGG TTAGTAGACA GAGAACCACC TGAAGgtaag 9667910 D201Efs\*11  
acttaaagag tgtatttcaa ataagaaaca aacatactac aattgacttc 9667860

agtaggggtg gttgttattt gttaaaaaat aacatgattg tcaagtaact 9667810  
atagtatttg gcatgaaaaat aagaggtttg ttccagaaat tttcatcttc 9667760  
ttttgtttat aatgtaagag ttgaaaactc tggaaaataa tgggaacaac 9667710  
agagattaga ctttaaaaaa gattagggaa aagggaaatg gagtgatctg 9667660  
agggaaaata ttctgcaga tatttagaaa tgataaaata atatggtgga 9667610  
aagacaatct ttagagtta taagaaatta attggtagta ggaggacct 9667560  
atatatatac tgcttagaat acaagaaggt tatatccatc ttgggacaat 9667510  
ccatttaggg tcatttaaaa aacgtaacca tcttgaatt ttactgcca 9667460  
aaacacctct ggtaggttt tttgttttgt tttgttttgt tttgtttgca 9667410  
gcgcgatctc ggctcactgc aaccttgac ttccaggttc aggtgattct 9667360  
cctgcctcag actcctgagt agctggatta taggcatgtg ccaccaggcc 9667310  
tggctaattt ttgtattttt agtggagatg gggtttcacc atgttggca 9667260  
ggctgttctc aaactcctgg cctcaagtga tctgccacc tcagcctccc 9667210  
aaagtgttg gattacaggc gtgcaccaac atgcccggcc aaagacggtt 9667160  
atgttattaa aattatata tagcatttta atatataaat aaagaaattc 9667110  
ttaatttatt tcacaagaaa gttgtcctat taaactaatt ttcaatgtga 9667060  
atatcttgac atttttactg ttacattggt taattcataa acttcttgtt 9667010  
gtagaatatg actgacagct tcatagccca gcattagggtg actgttttac 9666960  
tctgttgagc actatttatt tatttattta tttagagatg aagtctcact 9666910  
tttgtcgccc tggcttgagt gcaatggcac aatcttggct cactgcaacc 9666860  
tccgcaccct gggttgaagt gattctcctg cctcagcctt acaagtagct 9666810  
gggattacag gcgggtgcca ccatatctgg ctaatttttg tatttttaat 9666760  
agagatgggg tttcatcatg ttggccaggc tggctctcga ctccccctct 9666710  
caggtgattc acccaccttg gcctcgcaa gtgctgggat tacaggcctg 9666660  
agccaacatg cccggcctta ctctgttgag cactttttaa agtttctgta 9666610  
ttggaaaaat taaagaggca cttgtccttg gttttgaatt ctacagtgtt 9666560  
ttaactttat gttacttttc acttttctgt cttcctcaa attatttttt 9666510  
gttgttgttc agaatccttt agtgatatta agctcacata atgtttgttt 9666460

caaaaatag ttagatttaa agtgttacca taaaactcct tgttttggtg 9666410  
aattttgatt taatagtgca tacaaattca tatttagAGCT TGTTCATCGA 9666360  
GTGAAAAGAA GAGCTGACCC AGATCCCATG AAGAACACGT GTAAATTATT 9666310  
GGTGGTAGCA GATCATCGCT TCTACAGATA CATGGGCAGA GGGGAAGAGA 9666260  
GTACAACCTAC AAATTACTTA gtaagtatth gatattgcat cgagtaattg 9666210  
aaaaaaaaat ttgggtgggt acattccatg aaacttaatg caaccagatc 9666160  
tgttccagat actctgttat ttccctaaaa tatttgaggg atattctctg 9666110  
aggtttttat gttactgtat ggaaattata gtttcaaatt tgtgacaacc 9666060  
cattttaccc ttgaactaat attttctgca tgttagaatt tatgcatata 9666010  
gggtttggga gaggttataa tgtagtcctt cctccttgat ataagtgagt 9665960  
tctttaaaaa catcactgct atcatggtag tgaacctgtg gtgtcacatg 9665910  
tgaatgtaaa aatatgtatt tgcatgaacc catgtttttc ttttgcttat 9665860  
atgtatattt cagagaggaa ggcgagtttt gtttgtcatg ttaaagacct 9665810  
aatcattgga cttcacttga aataggtggg actttcatgg tcataactag 9665760  
ttctagggca cagaagtga gaaagatgt aagaagtgat gatactggat 9665710  
ttttaagtat gaactattat gatttttgaa gtctggggaa tcatttttca 9665660  
ttgacatttt ttgctagtgt gacttcattc gtcatgatta cttggcactg 9665610  
accaaaatgt tgttactgag ggaataatgg agaatgcagc tattcatgaa 9665560  
gcaagaagaa gctggtgcag taaagatgtc tttctcattg ccttgctttt 9665510  
cccatgctgt ccattttatt cataccctcc caacttcttt cccttcctt 9665460  
tcatgtcaag tggatttttt tttttttttt tcaacacaga gtctcactgt 9665410  
gtcgcaccagg ctggagtgca gtggcacaat ctcagctcac tgcaaccccc 9665360  
acctcctggg ttcaagcaat tctcctgcct cagcatcaca agtagctgga 9665310  
attacaggcg tgaaccacag cactcggccc catatcaagt gaatttatta 9665260  
tgaggctagt aagagtcact gtgattcttg ttcctaaata agagagattt 9665210  
ttactttaa aagcttctct cttaatctgg gttttatatt aaggggctcc 9665160  
tcttatttta cttctttggt cattgcacta taaatagaa tataatgaga 9665110  
gatctagtct taaaaattgt atttttttac aacttcttag gcataacttg 9665060

tttcacagtt gctagaacaa acctcatcaa cccagttttt gaacagtaga 9665010  
atattctctt tgagaaaaag ataggtaatt agcattttgt tctttctcat 9664960  
gtcattttcc ttggaaacta tactgccttc cttctccagt tttcccaaat 9664910  
cagagaacaa aagaaggagg gttgctgaaa tgaaccttgt tctttctggc 9664860  
tgtcttctta cccattcctc agtgctgaac tttttggggt gagagtgggg 9664810  
gaatagggtt ggtagttgtc tgccacggcc cttacttgt ttctggggaa 9664760  
gacattcgag gtactcacca agagatagag tgaagatgga attcttttta 9664710  
gaaggaata cagttgacc aggaacagtg cgggggtgtg gttagaagca 9664660  
ctgaccttct tccctctgca gtcgaaaatc ctcacgtgac tttttttttt 9664610  
taaggctctg tcgcccaggc cggagtgcag tggtgaaatc atagcttgct 9664560  
gcagcctcta ttgcccgggc caaagcaatc ttcccacctc agcctcctct 9664510  
agctgggaca acaggtgtc acccttcctg gctaagtttt ttgattttta 9664460  
gtagagatgg agaatttccc aggatggtct caaacttcta agcttaagca 9664410  
atcctcctgc ctcagcctcc caaggtgctg ggattacagg catgagccac 9664360  
tatgcccggc cactgtataa ctttgattct ccaaaaattt aactactaat 9664310  
agtctactgt tgaccagaag cttaccaat aaaataagtt gattaacaca 9664260  
tttttaaaat atgtattatt actgtgttct tacaatcaag taagctagag 9664210  
aaaggaatat gttatgatga aaatcataaa aaaaaaaaaa agcccggcat 9664160  
ggtggtgtgt gcctgtagtc ttctgttact caggaggctg aggtgagagg 9664110  
attgcttgag tccagaaatt caggctgtag tgagctatga tcgtgccgct 9664060  
gtactgcacc cctggtgaca gagcaagacc ttgtctcttg aaaaaaaaaa 9664010  
aagaaatca taaggaagag aaaaatacat ttactattca ctaagtggaa 9663960  
gtggatcatc ataatggtct tcatgttgag taggctgagg aggaagagga 9663910  
agagttgatc atattgtctc tggtgacaga ggctcaagga aatccatag 9663860  
taagtggaca cttgaagttc aaatctgttg ttcaagggtc aactgtattt 9663810  
caggtatact gattgacttt taaatttaat ttttattatt ggctgaaacg 9663760  
gtagttttaa aaaagcctgt tacttgtcat tttggttcca tgtgcaattg 9663710  
agtacctgaa atttaggta aactatacca ttgttttatt ctggtaacag 9663660



cactttaagt ttggggccaa aggttgggaa tactctgata cagtaacatc 9663610  
tcaatgctag tttttgcgaa agtagaaact tttgcaatgg cctctaaact 9663560  
gagatTTTTT ctttccccat agatTTTata ttgcattgcc aggagaggta 9663510  
aagagttaca taatgtcttt tttctTTTT aaatacacac agATAGAGCT 9663460  
AATTGACAGA GTTGATGACA TCTATCGGAA CACTTCATGG GATAATGCAG 9663410  
GTTTTAAAGG CTATGGAATA CAGATAGAGC AGgtatttat caatagatat 9663360  
ggcttatatt acttaagttt tgtaatgtaa atatttgtca cttgtattca 9663310  
aaacctaanaa acttgtcctt aacaataatt gtaaataagt tttctcagat 9663260  
gccaatgatt ttttatgatg aattgtgcag tatttttgat gttaattagt 9663210  
tctagattgt gaagttttct gtccttagtc tgcctttagg tagaaagcct 9663160  
tttatgctgc tgtgctttgt tccttctttg aattcatggc ctttatattc 9663110  
tctgtagttt tcttcccccc tccgattatg ctttaagtctt tagttaaaac 9663060  
tctggcatgc accattgaat ccttagtcag aaaatttact aaaaaaact 9663010  
gtgtaccttt gcaaggctgt atttatatat acagaacctt taggttcttt 9662960  
cctctcagat atctccttct gatttcttgt aatctgttaa cagagtgtgt 9662910  
ctagtaatgt tatattaatg tcatcttaat aatagctcat attaaaagt 9662860  
atttcaaatt gctaggacta attaaaaagg cttctgacaa agggatttgc 9662810  
tttgggcaga gagacatttt gatatgtaaa ttatataaat tgttatctct 9662760  
atTTTTTcc aagctTTTTg tagtaaacca tatttttata agttatatag 9662710  
tatagaattt agaggttgaa aaaattttta aaaatcattc accatgttta 9662660  
taaagttaa actttgatat tacttgtata aaactaagag aattatTTTT 9662610  
cccttttcat tctctttcac tgttacgcat tttcttttta agttattatt 9662560  
tgaataggta acatgtacac agtacaaaag ccagtgaaaa gtaagtctct 9662510  
gcagcctgtt tattgtcaaa ccagttcctt tccccaaaga cattcatgtc 9662460  
actagtttca tatgtatctt tctagagatg tcgtatgcag gtatagtgt 9662410  
tgtatatgtc tgtatttgac acaacggtgc tatgcagtac acttttacac 9662360  
cttgctTTTT catttcacag tatgttggag agtacttcat gttcatgcat 9662310  
gtaaagctgc ttcacttggt ttattataaa tagctgcatc atgtttgagt 9662260

ttcaggaac ctgtaaattt tctttttgct ttaggcattt ggaaccagtc 9662210  
gaagaaacag gaataatata ggagattaa acattaactt ctttacatct 9662160  
gatgaaggat ggattggagg gtgtggttta gatgtgtatc atgggtgggct 9662110  
tctaagtagt tctatcccag atttgacctt gaccagccac catcaaaaact 9662060  
gcagagtcca ccccagtaaa cttaccacac agtggcagag gagaccagaa 9662010  
tgggccttct ctgcaggcag gcaggcaggc aggcaggcag agagactcac 9661960  
agaaactctg agctgagcat ggtttccttc tttatctcac acttactaat 9661910  
gggagccttt gttacttttt tttttcttct ttgcaggttt aatatgaatt 9661860  
tgtctgaaat gcctgtataa ggagaagact ctattcttag cctttttattc 9661810  
ctttgatgca caaagagatg tatattttat tattctttcc tgagttgtcg 9661760  
actgtagtgc taataaatat tttaggctcc tgtaacccaa gttcttattt 9661710  
tttcaaaaata aacatggagg atatgaaaat ttaagagtac atttataata 9661660  
ttataaataa ttcattgaca tatgttttcc ataccatag cttctctggt 9661610  
tgtttcaaac attgaatatt ggtactgaag aatttatgaa ttttggtttt 9661560  
aaaatgtttt ttttctagaa cgattctttt tttgaacaga taaaataatg 9661510  
cagtattcag agccttctga cttattttgg aagtgttcta agtatatgat 9661460  
ctctttaagt atag**ATTTCGC** **A****T****TCTCAAGT** **CTCCACAAGA** **GGTAAAACCT** 9661410 **I284T**  
**GGTGAAAAGC** **ACTACAACAT** **GGCAAAAAGT** **TACCCAAATG** **AAGAAAAGGA** 9661360  
**TGCTTGGGAT** **GTGAAGATGT** **TGCTAGAG**gt aggtcttaga atcctggata 9661310  
tggtgctaac accactttgt catttctgat atgtggattg tatgtgtttt 9661260  
aatgaaggag catgttagaa aagatggaca cccagaagca gtctcctcca 9661210  
gctgatccag cagtaacccc atcccagta gcagcataga caacaaataa 9661160  
caaaaactct atgaaaaaga aaaacgctat aaagcaatgc ttcctttttt 9661110  
tttttttttt ttttttgaga cagagtttca ctcttgttgc cctggctgga 9661060  
gggcaatggc gtgatcttgg ctcaccgcaa cctccatctc ccaggttcaa 9661010  
gagattctcc tgcctcagcc tccaagtag ctaggattat aggcattcac 9660960  
caccacggcc ggctaatttt tgtattttta gtagagacag ggtttctcca 9660910  
tggtggtcag gctggtcttg aactcccgc ctcagatgat ccgtctgcct 9660860

cggcctccca aagtgctggg attacaagtg tgagccacca tgcccggcca 9660810  
aagcagtgcg tcttaacctt aatatctttg aggatctaag gagacaatca 9660760  
gtggatcttc tctagaaaat aacatggata cccaatatat agagtttttg 9660710  
cacactgttt cattagttct gcacacttag ttcagctctc tctgaagctt 9660660  
atcaatttat cttttagggc agtaattatc aaacaggtta tgaacatgta 9660610  
ttggagagta gaaatatagc ttggagatct gaaagttctc tacaggaatt 9660560  
taaaatTTTT gtgtttttat tctggcgatt aatctaaaga tggctaactt 9660510  
aatcatttta tgtcatttgg agtcttgccg tataacaggg tgctgccatg 9660460  
tgattccagt gtcttgagtt tgtgtgtgct attactttgg tgtagaatga 9660410  
ctttatatga agcagatagtt tttatctttt aatgtgttgg caagtttatt 9660360  
agtttcttgt tgttgcttta attatcacia gtggagcagc ttagaacaac 9660310  
acttatttat cccatagttt gcatgggcta gtccaggatg ggtgtggctc 9660260  
atctggattc ttgtttaggg tctcatgagg ctgaaatcaa gttttcaaag 9660210  
cttcaataga attaaaggat attataacta ttcattccaga tggagaagca 9660160  
taatgtgcag cacctgtgtg gtactcattc ataccttgtc taatttgatc 9660110  
tgctgagcac cctgagaggt tggttgagac agcatccttg tgaggaggct 9660060  
cagcaagtgt tactgtttat tccagctgac atgacaaagc agcataggct 9660010  
gggggactta aacaacagaa gtttgggttt tcacagttct ggaagctgga 9659960  
agtccaaaat caaggggtca gcagggttga tttcttctga ggccaaggta 9659910  
cttgtggtgt agatgctgtc ttctccctgt gttctcacat ggtccttccc 9659860  
tcagtgtgtg tgtatattct gatctcctta tcaggacacc agccatattg 9659810  
gattaaggcc cacccatag acctcagtgt accttaatta cctccttaag 9659760  
ggccctgttt ccagatagag tcacattctg gggactgtt gagggttagg 9659710  
acttcaacat ttgaattgtg ggggtggcaca attcagccag tagcaggaag 9659660  
attaaatgac ttgtctgatt agtcatacaa ctggtgatgg cagaggttga 9659610  
attgagcaca gatctcctga ctcttagaac agctgaacca ctgctcctgt 9659560  
ctgcttttct gtgagcctcc agacagccca tggcagggga ggaaccaaag 9659510  
agaaaaatga cttatgttga cagatgttcc tctccagttt tcttccctaa 9659460

gcctcctaga atattcctag aagcctcatc cttttaccac ggaactatca 9659410  
gaatccccat gtaaccacac ttcattcctc atatagggct ctctggcctc 9659360  
tcatttaaag cattttaaac attgaggggtt ttggctaggc atgggtggttc 9659310  
atgcctgtaa tcccagcact ttgggaggct gaggatgagg cagtggattg 9659260  
tttgagccca ggagttcaag gctagccttg gcaacatggt gtacaaaaaa 9659210  
tacaaaaatt agccgggcat ggtgaggcac gcctttggta ccagcttctt 9659160  
gggaggctga ggtgggaggt tcacttgagc ctgggaggtc gaggctgcag 9659110  
tgagctgtga ttgcgtcact gcattccagc ctaggtgaca cagcgagacc 9659060  
ctgtctcaag caaaataaat caaaccccc ccccaaatta aggttttttt 9659010  
aaacttgag acgctggacg gttatggtag aggtttttaa agtaatgtat 9658960  
gaagcccttt taaattaaga aaaaaaaaa cctctcaaac ctgcagtgtt 9658910  
gatttaaagt gatgtaaaat ctttatttta gtaacataaa actgggtatg 9658860  
tatgcttttc tataagtga tatttatata aatgacaata tattatgaag 9658810  
ctcaaaaaag ttaagatta aaatttctat aaaaccaatt gaatccttga 9658760  
aataacttgag agggatctgt tttggcctgg agtgctgcaa tccccttacc 9658710  
gaattggagc atctctagtc ctgggctgta tgtcttcaga acagccctcg 9658660  
gaggagcagt gagttagttc tgaagagctg gagcaagctc ccgaactatt 9658610  
cccttttgtg tcccttgtca gatgacagtg tgtgcctctc acctgtgcag 9658560  
gtggagaagc actttaggga aagagcaaag cactgcacga ggttgtgatt 9658510  
gctggtgctg agctgcatgc catcatagtt ctgttctgga atgtttagtt 9658460  
gatttagatt acatctttta gtctgatga attgttaatc taagaatgct 9658410  
tttttttttt tttttttttt tggcttttca aagCAATTTA GCTTTGATAT 9658360  
AGCTGAGGAA GCATCTAAAG TTTGCTTGGC ACACCTTTTC ACATACCAAG 9658310  
ATTTTGATAT GGGAACCTTT GGATTAGCTT ATGTTGGCTC TCCCAGAGCA 9658260  
AACAGCCATG GAGGTGTTTG TCCAAAGGgt aagtttttcc atttcttgtg 9658210  
tgaatatgct gctgggatta ttaagatgat tggattatat tataattctg 9658160  
tatttaataa gcaatttatc tctgtttcct tttgacttta gCTTATTATA 9658110  
GCCCAGTTGG GAAGAAAAAT ATCTATTTGA ATAGTGGTTT GACGAGCACA 9658060

AAGAATTATG GTAAAACCAT CCTTACAAAG gtatgttctt ttatttctaa 9658010  
aagaatagtg ttagagttta ttgtagtaga acctcagtta tatatttatg 9657960  
taggtatttt tttaaaaaat gtaatatata ctgtttttta aatttctgcc 9657910  
taaataaaat ttatgtattt ttgtgggata tatgaaaatt aaagcataaa 9657860  
gaagaaaata aaaatggcct gtcagccttc ttttgaaca tgtgaggacc 9657810  
actgcttttc tcgaaccctc tgcctggac ccctctgacc tgcagcaact 9657760  
cttagagctc cctgtctcct agtcctgcag tgcagctgtc attcaaggca 9657710  
tcccacaccc tcttattttc agaaccccat ggtctccctc tttctcagt 9657660  
ccatcatttt ggtgtagtgt atcttgcagg agcttcctaa gaaaacgtag 9657610  
atgacctgca tattgttggg atttcatata tctgaaaatg tctttattcc 9657560  
actcttaagc ctgattgata attttggctg agtatattct tagttctcat 9657510  
gttctctatg gtcttctgtg catgttgctt ctaaagaatc tgaagtcat 9657460  
ttgagttctt atctttgttt gtcacctgtt tttttctctg gaatatctta 9657410  
agatcttggt tttctccagc tatgtctgtt aaaatgtgtt tgactacaaa 9657360  
taacagaaaa ttaaataagc agtggtttaa ataaggggtt tatttgtctc 9657310  
agtcaacaag aagttcaggg atagcatttt ctgggtggta cagcaactca 9657260  
gaggtaccct cagtggctca agaacaagca ggaagtctt gtcctcatgg 9657210  
atgtcacctc atggttttaa gatggttctc ttctgtgttg gagaaaggag 9657160  
gagaaagaga acatggctag cctagtctgg cccttctaaa aagcttctct 9657110  
ggaggcccca tcctggcttt tgtttatatg ttactggaca gcactgggtc 9657060  
ccgtggctgc ccttagcctc aacggaatgt ggaaagctgg ctatttttagc 9657010  
tgagtatatt gctgtcctgg gcaaaattag ggctcattaa gtaaggaaga 9656960  
aggggagaga gatgttggta ggacatatta gtatctgata tactgatttt 9656910  
taatttttat ttaattttta ttttttttga gacagagtct tgctctgtgg 9656860  
cccagtctgg agggcagtgg caccatcttg gctcactgta acctctgcct 9656810  
tctgggttca agcagttctc ctgcttcaac ctcctgagta gttgggatta 9656760  
caagcacctg tcaccacgcc tggctaattt ttgtattttt gttttagaga 9656710  
cagggtttca ccatgttggc caggctggtc tcatgaacc ctagacctca 9656660

gtgatccact caccttggct tcctaaaggg ctggttggt tactgatttt 9656610  
ttgactatga tgttatactt ggtgtagggt atgggaaaac atttgcaaaa 9656560  
gacacatctg agaaaagact gctatctgaa atatacaaag aggccgggca 9656510  
tgggtggctca ttcctataat ctccggcact ttgggaggcc gaggcaggag 9656460  
aatcacttga gccaggagt ttgaaactaa cctgggcaag atggtcagac 9656410  
cctgtctcta caaaatataa aataaataaa taaataaaaa tttccatatg 9656360  
tataaagaac tgttaaaatt caacaataag aaaatgaaca acctaattta 9656310  
aaaacagaca aaagagcaga acagatacct ccaaagatat acagatagca 9656260  
gagaagcata tgaaaagatg ctcagcgtca tatgtcatta ggaaattgca 9656210  
aattaacaat gaagctggtt gtaggggtac atgcctgtag tcccagttgc 9656160  
ttgggaggct gaggtgggag gattgctcga gccaggagt ttgagacca 9656110  
tcctgggcaa cattagttag atcctatttc tataaaaaac ttaagaaac 9656060  
ccaacaacia tgtgctatta ctagtagctt attagaatgg ctaaaatccc 9656010  
aaacactggc aacacaattc caacaaggct atggagcaac aggaactctc 9655960  
attaattgct agtgggaatg caaaaatgga acagccactt tggaaggcag 9655910  
ttggcagttt cttttctttt tcttttttct tttttttttt tttttggaga 9655860  
cggagtttca ctcttgtcac ccaggctgga gtgcaatggc gccatctcgg 9655810  
ctcactgcaa cctctgcctc ccaggtttaa gcaattctgc ctcagtctcc 9655760  
tgagtagctg ggattacagg tgcccgtgc cactcccagc taatttttgt 9655710  
atttttagta gagatggggt ttcacatgt tgtccaggct ggtctcgaac 9655660  
tcctgacctc aggtgatccg cctgcttcag cctcccaaag tgctgggatt 9655610  
acgggtgtga gccactacgc ccagccataa gaatgtttat ggcagcttaa 9655560  
ttcataattg ataaaacttg gaagcaacca agatattcct tagttggtaa 9655510  
atggataaac tggcacatcc ataaaatgag aaaaaataa aaagctatta 9655460  
agccatgaaa agacatagag gaacctataa agcatactac taagtaaaat 9655410  
aagccagtct gaaaggctac atactatatg attcceaata tatgacattc 9655360  
tagaaaagac aaaaccatgc agactataaa atgatcagtg attgctagat 9655310  
gctgggggag ggagggatga ataggtggag agcagggtaa ttactctgta 9655260

tgatacttca acagtcagta taagacatta tgcatttggt gaaacacata 9655210  
gaatatacag cacaaagagt ggaccctaac ataaactgtg gactttgggt 9655160  
gatttaaaaa caggtgggtg caggagccta tagtcccagc tacgcgggag 9655110  
gatcacttga ggccaagagt tagaggctgt agtgtgataa atgcaactgt 9655060  
gaataccgcg tacattccag cctgagcaac ttagcgagat cctccttttc 9655010  
ttttttgaga tggagtctcg ctgtgtctcc catgctggag tgcaatggca 9654960  
tgatcttggc tcaactgcaag ctctgtctcc tgggttcatg ccattctctt 9654910  
gcctcagcct cccaagtagc tgggactaca ggcccccca ccaccacgcc 9654860  
cggctaattt tttgtatttt tagtagagac ggggtttcac tgtgttagcc 9654810  
aggatggtct caatctcctg accttgtgat ctgcccgcct tggcctccca 9654760  
aagtgttggg attacaggcg tgagccaccg tgcctggcct gagaccctgt 9654710  
ctctttttat ttatatatat atatatatat atatatatat atatatatat 9654660  
atatatatat atttatattt taaatttaag ttctaggata catgtgcaca 9654610  
acgtgcaggt ttgttacata tgtatacatg tgccatggtg gtgtgctgca 9654560  
cccattaact cgtcatttac attaggtata tctcctaag ctatcccttc 9654510  
ccccttcccc ctccccccac cccacgacag gcaccgggtg gtgatgttcc 9654460  
ccttctgtg tccaagtggt ctcatgttc aattcccacc tttgagtgag 9654410  
aacatgctgt gtttggcttt tgtccttgcg atagtttgct gagaatgatg 9654360  
gtttccagct tcatccatgt ccctacgaag gacatgaact catccttttt 9654310  
tatggctgca tagtattcca tgggtgtatat gtgccacatt ttcttaatcc 9654260  
agtctatcat tgttggacaa tgttgaacaa taatgtagag tggatgaga 9654210  
aaagaaaaag aactaatta gcttttggga atcttttaat ttcttttttt 9654160  
cttttctttt tttttttttt gagatggagt tttctcttgt tgcccaggct 9654110  
ggagtgcaat ggtgtgatct tggctcactg caacctccgc ctcccggatt 9654060  
caagcaattc tcctgcctct ttctcctgag cagctgggat tacaggcatg 9654010  
cgccatcacg accagctaat tttgtatttt tagtagagat ggggtttctt 9653960  
catgttggtc aggctggctc tcaggtgatc cgtctgcctc ggctcccaa 9653910  
actgctggat tacaggcgtg agccaccgtg cttggcctta atttctaaat 9653860

ttatTTTTTT cttatggtac tttgttttag gggaaaaaat ctctcaaact 9653810  
gtgttttccc tctattctca catcacaacc atcatcatca acacagaaga 9653760  
cttgtgtgac cagaccaaac gtgtggggat ttccccctac atatcaagca 9653710  
gtagacatca gctaggtgtc ctccaattca attcaaacac tctccacccg 9653660  
gaaatagtat cagatctcac agtttgaggg cccagtccca caagactgac 9653610  
tgttccctcc tccccaccag ttacaagtct gagcctccag aacttctgac 9653560  
caactggcct caagttgggg tttccacatt ctctcttttg ggtctgatta 9653510  
atttgcttaa gtggctcaca gaactcaggg aaaagcttaa cttagtttat 9653460  
gggtttatta cataggatat tttaaaggat acaaagaagc tgggtgcgggt 9653410  
ggctcacgcc tgtaatccca gcactttggg aggccgaggt gggtagatac 9653360  
ctgaggtcag gagtttgaga ccagcctgac caacatggtg aaacctcgtc 9653310  
tctactaaaa atacaaaaat tagccaggtg tggtggtgca tgcctataat 9653260  
ctcagccact cgggaggctg aggcaggaga agtgcttgaa cctgggaggc 9653210  
agagattgca gtgagctgag attgcccac tgtactggtc aacagagga 9653160  
gtctttgtct caaaaaataa aaaaaaaga aaggatacaa agaaatagcc 9653110  
aatgaaggg atacataggg cgaggtctgg aagggtcccg agtacaggag 9653060  
cttctgtccc catggagttg ggatgtacct ccctcctggc acacgaatga 9653010  
gttttgacc ttctgtcaa cctccatgta ttcaaaatgc tctctggaag 9652960  
ctctctgaat cctgtttttt gagattttat ggaggcttca ttacataagc 9652910  
acgaatgaca actgtgtaga aatgtgattg gacaaaatgg gtatgttctc 9652860  
atactaaccg actgagtgga gaagcccacc aaggcctgtc cagattctcc 9652810  
ttgacctctc tgtgcagcat tcctccctcc acagtaaagg gcaggaccct 9652760  
ctctagaatg agaatgagaa tgaggatctc tggaccacaca atcagattag 9652710  
agtcttgcc tggatcaggt aaaaggagga caggagaagg tcagagagag 9652660  
agattctggt tcctgaggat tgctcctgag ccctaaagca cccaacatt 9652610  
ataacagaag accgtaacca gggctacgga gggttgtaag ccaggagcca 9652560  
tggacagaaa catacatgtg tgtacagtag ctcacgcttt tacttttttg 9652510  
gagtcacaac ttcttaatgg cttgatttca tgacatattt tctttgtct 9652460



tccagaactt tcctcttaaa aaaacacagc aaaaaaacia aatttgattt 9652410  
gaaatTTTTG agatTTTTTT ttaagagtca ttagcaaadc cactaatgaa 9652360  
TTTTCCCCaa gcagtttagga gatatttctc ttcattacac ctttgggatt 9652310  
tgagtGcttt tgctaaaaat ttaagTTTTt tttcccacta cggTTTTaat 9652260  
atgaacatgt ggaaagactt cttgtataga aaaatgactt gcaaaatatt 9652210  
atTTTTtCag gttctatgga gtgatttccc ccccttagga aaaaagaact 9652160  
caggaatTTTT aagtttatat gtatatatat ttattttatt ttattttatt 9652110  
tatttatttt aagacagact ctcaactctt tgcccaggct gggggttcag 9652060  
tggcctatct cggctcacag caacctccgc ctccctgggt caagcaattc 9652010  
ttctggctca gcctcccaa tagctgcgat tacaggcgcc caccacaatg 9651960  
cctggctagg ttttatattt ttagtagaga cagggtttca ccatgttggc 9651910  
cagtctggtc tggaactcct gacctcaagt gatccagctg ccttggcctc 9651860  
ccaaagtGct ggaattccag gcgtgagcca ctgtgcctgg cctttaagtt 9651810  
tgatatttta ttcagataaa tatggaaaa aaatTTtagc tttattggca 9651760  
aaatTTatta ttcatataga aatcatctga taatctgata gattaagtac 9651710  
agccctgcaa ctggattcta ataaaccaag tcctctaggt cattaagatt 9651660  
gttattggac atgaattcag tcattgagaa aataaaacat tgTTTTgttg 9651610  
ttcctcagtt gtggTTTTtG tttttTTTTt aagatagagt ttcactcttg 9651560  
ttgcctaggc tggagtGcaa tggcatgatc tcagctcact gcaacctccg 9651510  
cctcctgggt tcaagtgatt ttcctgtctc agcctcccga gtagccggga 9651460  
ttacaggcgt gcgccaccac acccagctaa ttttttGtat ttttagtaga 9651410  
gatggggttt tactatgttg gccaggctgg tctcgaactc ctgacctcag 9651360  
gcgatcaacc caccttggcc tcccaaagtG ctgggattac aggtgtgagc 9651310  
cactgcgcct atccgtactg ttttttttac cccttgcttt ttttttcctt 9651260  
tctgctgaga tgcttttaggt tttaacagac atgtgattgg gccgaggggc 9651210  
atgtgaggag gctggacaat taactacagt tagcttattg catttatcag 9651160  
caccagattg tgtgtggttg aaatggccaa ggtttgatgt tttgttatga 9651110  
atgttccagt atatcttata aattacattt tcttaaattg atttgttact 9651060

acttacaata atgtttgata gtattaaata aaatcctact tattctgtta 9651010  
aattcatata attggtagaa gaatcatagt ccggttatta ctcttttttg 9650960  
agacaaagtc ttactctgtc acccaggctg gagtgcagtg gtgtgatcat 9650910  
agatcactgt agcctcagcc tcctgggttc aggtgatact ctcacctcag 9650860  
cctcccaagt agctgggacc acagggtgtc accaccatgc ctggctaatt 9650810  
tttttttttt tttttttgag acgaagtctc gccctgtctc ccaggctgga 9650760  
gtgcaatggc gtgatctcag ctactgcaa cctccgcccc ctgggttcaa 9650710  
gcagttctcc tgcctcagcc tcccagtag ttgagattac aggcgcgtgc 9650660  
ctccatgccc agctaatttt tgtattttta gtagagacag ggtttcacca 9650610  
tgttggccag gctggtctcg aactcctgac ctctgatcc acctgcctca 9650560  
gcctcccaa gtgctgggat tacaggcgtg agccaccatg cctagcccac 9650510  
ctggttaata ttttttatta tttttgtaga gatagggtct ccctgtgtta 9650460  
cccaggctgg cctcaaactc ctagagtaaa gtaatcctcc catctcagcc 9650410  
tcctaaagt ctggtattat aagcatgcag ttcttattct cttgttgatc 9650360  
tgattataag gctctattta agacagcata ggcccaactg gcagaagtag 9650310  
gtgatggctg gatattgaga aataatgttt tctttgcatg atccttaagG 9650260  
AAGCTGACCT GGTTACAAC CATGAATTGG GACATAATTT TGGAGCAGAA 9650210  
CATGATCCGG ATGGTCTAGC AGAATGTGCC CCGAATGAGG ACCAGGGAGG 9650160  
GAAATATGTC ATGTATCCCA TAGCTGTGAG TGGCGATCAC GAGAACAATA 9650110  
AGgtatgtgt gtgtcgagaa ttttttatgt ggtttgaaa gaggctgtgt 9650060  
ataatgatca taatgagagc tcagaaacgt attccattcc taggcgtttc 9650010  
cctagggatg gatgtgcaaa ttacaaagta ccttgaaacg tggttgtgtg 9649960  
ttttggggtg aagcacggtt catctaaatc tggttaaaac tatcatttgg 9649910  
actttgttgt caagcttaat ggtgtagatt tgagctctag gaaaaattac 9649860  
taataataat ggcttttttt ggagttctgg atttcagggt ctgggtgggct 9649810  
caggctttat gttaaaaatt tgtcatttca tttacaagtt gtcattcatt 9649760  
ttaactctac aatttacatg tacagtttac acgtttttat taacttttgc 9649710  
agttaaacac atagtttgcc tgactacaag cctcatggga gaaaggccct 9649660

tccttgtctg tcttattcat agctctatct tattcatagc tctatctcca 9649610  
gtgcctagta ggagtatctg gcatgtaaca aatatttggt gaataattaa 9649560  
tggaatcatt tactattggg ggtttctgat agagaatact agttgatttg 9649510  
tgatactgta aaacactttc agagacttta agagtgccgt gactaactct 9649460  
tagagtctga actaaaagtt gtgttaataa atatctgggt ctttcatttt 9649410  
atgtgaagtt aaacagcata aagcagtgtg aggaaaacaa tagttgcact 9649360  
gctgagttaa agagggtcgg tggggagagc ttaaaggagt ctgattctaa 9649310  
tcacaaaaga ttgtgaagta tttgtcctga ctccattttt gagcttggct 9649260  
gtgggctaata gtgcaagcct tccctggaca cagagggcaa gattacttct 9649210  
gcttttccct ggctctgaca ccctgctttc tgaaatttct gcctcctgtt 9649160  
ctttttgtga tctttgattg ttgcatctca tttttttttg gctttttatg 9649110  
tatattttct gcatctcatt ttctttggct gttatgtgta aacagttcct 9649060  
ctgttacttt gcatgttatg ttttattttt cctctgcttg acaacttgtg 9649010  
ccagagaaac atttttctac ccctttttgt ctactcttcc aacctgtcaa 9648960  
actggtgaat tttccttctc ttttcatagt ctctgcattt ctaatcatgt 9648910  
tcactatagt tcagtgctgc ccaatagaac tttctgctgc ggggcggggg 9648860  
atgttttgtg tctgctctgc ccagtatagt agccactagc ccagtggagc 9648810  
aattgaaatg tggctagaaa ctgaggaact gaattgtaaa ttctatttta 9648760  
tttaaatttt taataatggt tgcctgtgat gggagacggg aatgggcatt 9648710  
aactgtaaaa ggacatgagt gagattactg gaaggatgga aatgtcctaa 9648660  
aattgactta tagcaatggg ttcaacactt ggtaaagtta ttagaaatca 9648610  
ctgagttata tacttgaaat ggatcaattt tgtgatatgt gaaatatgtc 9648560  
ttaataaagt tgtaataaag ccaacaaaca aaaacagcag tgtgggagca 9648510  
gaggaaaagt agcgcggatg tagaggagct gtgaagtcac aagttgatta 9648460  
ttgttgaagc tggtgagggg cacgggggca ttcattgatac catcctgtct 9648410  
acttcataga tgcttgaata tttctgtaat agaaactgta aaatatgtga 9648360  
ctaggaacaa aatttaagta gccacatatg gttggtggct accatattgc 9648310  
atactgtttc tctaagtaat aggtcatatg cttcttgggt atgaggatag 9648260

tgtcagaact tgggagcaaa atgttttact ttgcagactg cctgggtgga 9648210  
catgcatgct gctgactctt cctgctgccca gttctggggc tcttcaaaac 9648160  
agccctgtaa gaacttgcca gtgaggcatg gtggctcaca cctgtaatcc 9648110  
cagcactttg agaggccgag gtgggcagat cacttgagcc taggagttca 9648060  
ggatcagcct ggacaacatg tgaaactcca tctctacaga aaatacaaaa 9648010  
attagctggg catagaagca catgcttgta gtcccagcta ctcaggaggc 9647960  
taaggtagga ggaacccggg gagttcaagg cggcagtgag ccaaggttgt 9647910  
gctactacac tccagcctgg atgacagagt gagactttat ctcaaaaaaa 9647860  
ggaaaaagaa aaaaaagaac ttgctaataga gaatggggcc tgggaagaac 9647810  
tttttttttc tggagctgcc agtctgtatc aatgaagaac aatttattta 9647760  
ttttgtcctg agcacatcat atttagtctg tgtttttcta gtttggttgc 9647710  
ccaagtagga gtccccttgt aagaagataa tgtgcatctt ctatgtttta 9647660  
tttatttatt attatttatt atgatttttt gagtggagtc tcaactctgtc 9647610  
gcccaggctg gagtgcagtg gtgtgatctc tgctcactgc aacctccacc 9647560  
tcccaggttc aagcgattct cctgccttag cctcctgagt agctggggtt 9647510  
acagggtgcat gccaccacac ctggccaatt tttgtagttt tagtaggatg 9647460  
gggtttcacc atgttggcca ggttgggtcaa ctgactggtc aacaaactcc 9647410  
tgacctcagg tgatccacct gcctcgacct ctcaaagtgc tgggattaca 9647360  
ggcatgagct gctgtgcca gcctatgttt taaatgaatt ccttaataaa 9647310  
aatattttta actgatgaaa agggcttaca ggacaaaaat aaagtagttc 9647260  
cttgacctag aaagacagaa cccatcacc tctactaggc aagcctatga 9647210  
agagcagttt gccacagtg gacttctctg tggacagatg acattagtga 9647160  
aaaggaatgt aggacctttg agattgtaac ttcttaggaa ggtttgctga 9647110  
acggaagagg aagtcttatg acaaggatgc aaacagaagc tgccagatct 9647060  
tcagggatgt gtaggcagaa agccagagtt gcgggttggc ctttttatcg 9647010  
ttagtgctct ccagctgctt gggagttgta actctgacaa atcagtgaag 9646960  
aggtcttctt atctgttcac tgtgaatfff aactccattt taacctgata 9646910  
aaatggaacc cagagataca tgatgttgat gaataaaccc accaaaatga 9646860

caactgcctg aggccccgat tagaataacc agaccctta gacatctgta 9646810  
ctgtaacgac agatttgggc cgggcgcggt ggctcacgcc tgtaatccca 9646760  
gcactttgga gaccgaggtg ggcagatcat gaggtcaaga gatcgagacc 9646710  
atcctggtca acatggtgaa accctgtttc tacaaaaaat acaaaaatta 9646660  
gctgggcgtg gtggcatgca cctgtagtcc tagctactca ggaggctgag 9646610  
gcagaagaat cacttgaacc cgggaggcgg aggttacaat aagccaagat 9646560  
tgtgcctctg tagtccagcc tggtgacaga gcaagactcc atctaaaaaa 9646510  
aaaaaaaaaa aaaaaaaaaa acagatttga agatgttttt taaaaagcca 9646460  
gttagtattt ctgtgtaaga tgaggtcttt gctatctttc tgaaagtagc 9646410  
tcctttggtg tctgatttgg tggttacagg cacctttgga gggctcata 9646360  
cacttggctc tcaggggctt catgattggt gtctggggtg aaagtgaagc 9646310  
cattttggca tctgcagagc actttggaga ccccgaccta agaagtaact 9646260  
atgctcagtt ttccctaagc ctcttctttt tttgataact tcaggaggtc 9646210  
tggaaaatga ccgcagtttt agagctcctg ataaaaccct cagccttaa 9646160  
agggagttat cctagtgggt ctgtactcca gggtggaag gtagttaga 9646110  
gactttttga gacactggtc ttgctggtt atgaaaatgt ttaggtaaca 9646060  
attggggatt taatttatat aaaatgtact attatgccta ttactaagct 9646010  
caaatattta aacaacttta aacttgatc atccatataa gtagccaaag 9645960  
aaggagaaga aacccttct cctgcatttc tgaattgttt tgtctgggac 9645910  
aacattaacc tacagaggtt cttaattctt gtcactgcat gagtggcatg 9645860  
cctgaggtga ggagatttca agtctgatgg agctacgagc tctctgttgt 9645810  
gctattctgc ttgtccttaa gtgggctttg actgggatgt ttggtctcag 9645760  
tatttgtata gcttgcttac ctctgtaaga agaattatag atccttaacc 9645710  
aagttcacat cagccattta gcattctatg gagggaggtt cccagttcca 9645660  
tatcagtggc ctttggagga gactgtggtg gccttgccat aactccaggg 9645610  
tggctctgat ggtggtttta cattaagagt ttgtctctag agaagacaca 9645560  
aacattgcat ggaatacat ttttatgata ttattttggg tccttattgc 9645510  
cttttttctc tcaagATGTT TTCAAAGTGC AGTAAACAAT CAATCTATAA 9645460

GACCATTGAA AGTAAGGCC AGGAGTGTTT TCAAGAACGC AGCAATAAAG 9645410  
TTTGTGGGAA CTCGAGGGTG GATGAAGGAG AAGAGTGTGA TCCTGGCATC 9645360  
ATGTATCTGA ACAACGACAC CTGCTGCAAC AGCGACTGCA CGTTGAAGGA 9645310  
AGGTGTCCAG TGCAGgtgag gagtctctcc acagggattt tgggaagtgt 9645260  
gtataacaag atgtccaaaa taagagaaga ctgaacttgc aggggcttta 9645210  
gaatcaactg aaaggggtgt gagtgtgttt gtttacatct acctcttttg 9645160  
cccttcacag caagaaattg ctttctgggc ctggcacggt ggctcactcc 9645110  
tgtcatccca gcactctggg aggctgaggt gggagaaatg cttgagaaca 9645060  
gcctgggcaa catagtgaga cactatctct taaaaaaca aaaacaaata 9645010  
agaaaagaag aagctttctg gaaagcagtg tgacattatg taacaaaatc 9644960  
cttgacctg catgctcctt ggtttagcag tcctatagtt aaaagaatct 9644910  
ttttttttt ttttttctc gagacagagt cttgctctgt cgccaggctg 9644860  
gagtgcagtg gcgcatctt ggcttactgc aatctttgtc tcccgggttc 9644810  
aagtgattcc cctgccttag cctcctgagt agtgggacta caggcacgca 9644760  
ccaccatgcc cggctaattt tttgtattag tagagacgag gtttcactac 9644710  
ggtggccagg atggtctcca actcctgacc ttgtgatcca tccaccttg 9644660  
cctcccaaag tgctgggatt acaggtgtga ggcaccgtgc ctggcaaaat 9644610  
aatctttttt atttaattta atttatztat ttattttgag acggcgtctc 9644560  
gctctgttgc caggctggag tgcagtggcg cgatctcagc gcactgcaat 9644510  
ctccgcctcc caggttcaag cgattcccct gcctcagcct cccaataac 9644460  
tgggactaca ggtacgcacc atcacgcctg gctgattttt tgtatttttag 9644410  
tagagacgga gttttagcat gttggccagg atggtctcga tctcctgact 9644360  
tcatgatctg cccaccttg cctcccaaag tgctgggatt acagagggga 9644310  
gccaccgtgc ctggccttta ttttctttt gagacagggc ctcagtctgt 9644260  
tgcccaagat ggagtgcagt ggcattgatca tggctcactg cagcctcaac 9644210  
ctcccaggct caatcagtcc ttccacctca gcctcccga tagacaggac 9644160  
tacaggtgtg tgccacctg ctaattttt ttgtattttt tatagagatg 9644110  
gggttttgcc atgttgcca agcttgtgt aaagtcctgg gctcaagtga 9644060

tccacccttc taagcctcct aaagtgtgga gattctaggt atgaggcacc 9644010  
atgcctggcc caaataatct tttatttctt tttttttttt tttgagacgg 9643960  
agtcttgctc tgtcgcccag gctggagtgc agtggcgtga tcttggctca 9643910  
ctgcaacctc cgcctcctgg gttcaagcca tccccctgcc tcagcctccc 9643860  
cagtagctgg gattacagtg tgcaccacca cgcccagcta atttttgtgt 9643810  
ttttagtaga gatgggggtt caccatgttg gccaggctgg tctcgaactc 9643760  
ctgacttcgt gatctgcctg cctcagcctc ccaaagtgtt gggattacag 9643710  
gcgtgagcca ctgctcctgg ctgccc aaag aatcttttgg gcaacagaga 9643660  
taagatttaa caagggtata agatttaaca aggttttttt atggctacat 9643610  
cctaatagca aaattttgga aacaatcaaa atgacagtct tgggatatga 9643560  
atgttatcat gattctatat actggaatag tgtggaggaa gtaggttaca 9643510  
agttagaaag ttaccaggt tttcattttt tatatacact gatagaccag 9643460  
tgcctggctt agaagtaaaa gggttaaact tcagttttct ggtgaataat 9643410  
tgagatttaa ctggatacag tgcatattaa cgctgtaaact actgatgggg 9643360  
agtagagttc tggctgccga gtgtcttagc tatggattgc cttgtggccc 9643310  
caccttgtct tttttttttt tccttgtctt tttttttttt tttgagagag 9643260  
tctcgccctg ttgaccaggc tggagtgcag tggcgcgatc ttggctcacc 9643210  
gcaacctctg ccttccaggc tcaagctatt ctccctgcctt agcctcccga 9643160  
gtagctggga ttacaggcat gtagcaccat gcccggttaa ttttttgtat 9643110  
ctttagtaga gacggagttt caccatgttg gccaggctgg tctcaaacc 9643060  
ctaacctcgt ggtccacctg cctcatctt tttttttttt tttttttttt 9643010  
tgagacagaa tttctctctt gttgcctagg ctggagtgca gtggtgcat 9642960  
ctcggctcac tgcaacctct gtctccgggg tccaggcgat tctcctgcct 9642910  
cagccttcta agtagctggg attacaggag cgcaccacca cgcccagcta 9642860  
atttttgtat ttttagtaga gatgggggtt caccatgttg gccaggctca 9642810  
tctcgaactc tcctgacctc aggtgatcca cccacctcgg cctcccaaag 9642760  
tgttgggttg ggattatagg tgtgagccac ctcgcccagc ccatcttgtc 9642710  
ttttttaaat taatgcgta aatgaatgaa aaccaagggc accaagatgt 9642660

ttcacaggtg attgctgtgt tcccattctt ttctcctata gtgtggcatt 9642610  
tatgtgacct cacgcacatt aggaagggac aaagtgtgtg caggtagctc 9642560  
tagcagcggg gatgtctgat gatgtaggag tgggtgacgg agccaggagg 9642510  
tcttccccgg tgatcttcag gtcactgtaa cgtaactgta gcgtttgatt 9642460  
tgatatgggg ccataatttg aattgctctg ttctgtctg ctgttcttct 9642410  
ccagTGACAG GAACAGTCCT TGCTGTAAAA ACTGTCAGTT TGAGACTGCC 9642360  
CAGAAGAAGT GCCAGGAGGC GATTAATGCT ACTTGCAAAG GCGTGTCCTA 9642310  
CTGCACAGgt tcgtgttctt gttgcttctt tggaatgctg tgggtcaagt 9642260  
gtgtgtgtgt ctttgaaaaa caagattatg ttttgttcag atgagagaca 9642210  
ccttattttt aatctcatat gccgggttga gtttctggca ctccctagtt 9642160  
tgtgacactt ggctttgggtg ggtttaagac ctgtttctat ttctctttca 9642110  
tttccatcac tctcctcttt ctccctcacag acatccactc tactgtggtt 9642060  
aatatttgcc tggatatgtg tatatccttg aaagatcata tagtgttatt 9642010  
ttgtgcatgt atgtgttttt aatgtgcaa aatgatattc taccttaaatt 9641960  
ttacttttaa aaaattcagt atcatgtttt aaagaattac ccatattgtg 9641910  
ctacagataa tataacaagg tttttaatgg ctacatccta atagcaaaat 9641860  
tttggaaaca atcaaaatga caatcttggg ataatgaatg ttatcatgaa 9641810  
tctatgcact ggaatagtgt ggaggaagca ggatacaagt tagaagggtg 9641760  
accagttttt ctatatgtat ctatatgtat ttcactgttg gggacaccta 9641710  
catattgttt agttatatga ttggctgtgt tttacttaca agtcaccaag 9641660  
tggtagctac ttccattgcc ttcatcccct tgatattcca gataggacac 9641610  
agatcacatc ctccacgtc ccttcaggaa cctgtgtgtt tctctgggta 9641560  
ctgaggagtg tcattgtgta gtcacagagg caggatgtgc tggctctctag 9641510  
agcaccactg ctaggttgcc tgtgtctgag gactccttat cctgacgttc 9641460  
tggccaacgc ttggaattac cctgctgtcc tattagcatg atgagtataa 9641410  
agtaatctct tgttcttact ttttttttta acagcccttg tcctaattgca 9641360  
cttacttaca ttttcttga gcatctcttt atatttttca gctattcaga 9641310  
tttctcctgt gaatagccag ttcatatatt tggttcattt tttaaaaatt 9641260



gggtttcatg ttatttcact actgtgaatt tggaggagt cttatgtaat 9641210  
catccatttg ggcatacgtc tcctatctgt tgccattctc agaacagaaa 9641160  
tctttaacgt aatcaaatcc atcattttgt tgtgtgtgtg tattttttaa 9641110  
acacatgggt cagaaaagcc atggcggatg gttaaaaaga tattttccac 9641060  
agctgcttct attagcttca taagttgtcc ttttacattc aggacttgaa 9641010  
tctttctgga gctaaccttt ccagggtgtcc agtatctttt gttcggtcaa 9640960  
ttgttgcttt aaaaatttca aagctatgtt attactaggt atataaacgg 9640910  
acatatctct acatctttat ctgctgttcc ttaccagtat ataatgttcc 9640860  
ttttttacc ttgcatgtt ttttgactta aattgtcaaa aagcaatatt 9640810  
cagtttgcta ttctagtttt tttgttctc tgatatact atctgtccca 9640760  
ttcttatatt tttcaaaatt tgtctctctt ggttggttg tttgattttg 9640710  
taatagcttt attgatacat aattcacact catgtagttt gccatttaa 9640660  
agtgtacagt ttaatgattt ttagtatatt cagatttatg cagtcatcac 9640610  
aattaatttt agaacattta cactactcca gaaagaaacc ctgtatcctt 9640560  
tagctatgat cctccaatcc cccattccc cacaactcag agcaaccact 9640510  
aaccacccta ttctttatgg agttgtctgt tttgaacatt tcatataaat 9640460  
ggaattatac aatatggttt cgtgaccaca tattgtatga ctggcttctt 9640410  
tactgaaca tagcattttt aaggttcatg tatgtttag catgtatcag 9640360  
tacttcatgt acttttattg ctgggtaaat tccattgcat ggatatgcca 9640310  
cattttgttt attcattcat tggttgatag acatttgggt tgcttccact 9640260  
tttttgctat aacaaataat gctgctgtga acatttatct atgagttttt 9640210  
gtgtggacag ttcctttgga tattattcag gaatagaatt tctgggtcat 9640160  
gtggtaacta tgcttaatct tttgaggagc tgtcagactg ttttccaaaa 9640110  
tggctacacc attttacagt ctcagcagca ttgtatgagg gtcccagctt 9640060  
ctccatatcc tcaccaacac ttgttatctt ttttattgta actatcctag 9640010  
gttttgatg aaggatgcaa acagaaagct ggaggtcttc agggacctag 9639960  
tgaatgaagt tgtgtcctat tttggcttga ttttggtttt ccgtgtgcat 9639910  
agtatgacat gttgcccatg tttttatctt ttgggatctg tcactatcac 9639860

attactttgc caaatgttag gaacctgatg gcccggcaca gtggctcaca 9639810  
cctgtaatcc tagcactttg ggaggccgag gtgggcagat cacgagatca 9639760  
ggagatcgag accatcctgg ctaacacggt gaaaccctgt gtctactaaa 9639710  
agatacaaaa aattagctgg gcgtgggtggc gggcgcctgt agtcccagct 9639660  
acttgggagg ctgaggcagg agaatggcgt gaacccggga ggcggagctt 9639610  
gcagtgagcc gagatcacgc cactgcactc cagcctgggc aacagagcaa 9639560  
gactccatct caaaaaaaaa ccaaaaaaac aaatgttagg aacctgaata 9639510  
tctaaatcaa gctttaaaga agcatttgct agctatgctc aatgtttcat 9639460  
cttcactgta ataataaaat agattgagaa aaatgctttc ttttaaataa 9639410  
acgtaagtaa aacaatttga aaacgtttgt tcttatcaaa cagccttttg 9639360  
ttcccttgat attttataca aaatagtaga tagcagagga taagtccctg 9639310  
ataaggaatc agtattttct agcaggaaaa gctagagAAC aacaacctca 9639260  
aaaaaaaaa aaaaaaagaa gaagaaagaa aaaaagcaat tagcatttca 9639210  
caaccagcag cagcagcatc acctgggagc ttattagaaa tggaaattgt 9639160  
cagtcccctc cctggatcta ctgcatcaaa aaatgtggga agggaggcca 9639110  
gcagtctgtg ctgtgtaacc ttctgtcagg tgatttccat gcatgctaaa 9639060  
ctttggggac catgctagat agatgatacc attttcagaa ttattttcct 9639010  
acctgtctaa tactctgact ttagtctttt aagaacagat gctcaacaga 9638960  
tatttattga gcatttttta atgtatcagg gcagtatcat ataccaaaaa 9638910  
tacaataatg atccacaata taaaccttcc ctgagctcac tggacatcat 9638860  
actttcagta atagtttggt aaatgactgt tgacatgatg aatgccagt 9638810  
gctcatgaaa ggttttatga gaaccagagg caaagtgcct ggttatctgt 9638760  
tggttactta ataaaccatc acttttgttt gaaactggcc agattttctg 9638710  
tacattttgt gttactgctc tgaaccctc taagtcagaa ttcttttgat 9638660  
tggcttcatt cttcagctga aaggccagtc cagagctgtg gatatatagt 9638610  
ccattgcttt cataaagtgt ttttttctc ctccctctatt tgtgttgact 9638560  
tttagctact tgtgctattc attttccaga atgattcact cattccatcc 9638510  
tgtctctccc agtttaactt tctttgggtg gttttctttg gcattattgg 9638460

cctgggcaca gtggctcatg cctatcattc cagcacttgg aaggccaagg 9638410  
tgggaggatc ccttgagccc agcagtttta caccagcatg gtcaacacag 9638360  
ggagatctcg tctctcaaaa aaaaagaaag aaaattagcc aggtatggtg 9638310  
gcgtacgcct gaaatcctag gtacttgtga ggctgaggca ggaggattgc 9638260  
cggaacctag gagtttgagg ctgcagtaag ctatgatcac acccctgcct 9638210  
tccagcctgg gtgacagact gagaccctgt ctcaaaaagaa aaataaaaag 9638160  
aataattgat ttatttaaga aatatttga gtatacctat aatatgatag 9638110  
ggattggaga taacttaata gatttgatca ttgctgtcat ggggctttcc 9638060  
agtctagtag agggaaaaca gaaaataaca ttaaataat atataaaat 9638010  
tgcaaaacat atgcaatgaa ggagagaagg agtgtgatag tgcataatgg 9637960  
aagtgggagg ccacatcaac ttagcatcct cagggatc tcaaaaaacc 9637910  
tttgagacaa aacttaatcc ataagaaaag ccagctaatt gccccaaaag 9637860  
agtggaaaca ccagcattcc aggtagaagg aatagtatct gttaatattg 9637810  
aaggaactga atggaggtg tcatagccaa agcagtgggc tgtgggagag 9637760  
ttgtgtgcga tgaagtcagg gccagatagg gaaggccgtg gagttctttt 9637710  
aagccttcat acaaagttg caatttattc taagtaatag cacataggat 9637660  
attcttttat atatgactgt gagatgcaga agtggagacc atgcattcta 9637610  
actggggctt gggaggccag ggactcatgc agcctagcct ggcacatagc 9637560  
caggcactcc catttaaatg ctgattgctg gtgagatgca ggctcttgtc 9637510  
ctagctctgt aggtcacttt ttgcttttgc aaggtaagat gctcacttgt 9637460  
atgagaaaaca gcgtattatg cacctgtaga actggtggac ctgtgactca 9637410  
ttctttttgt tatgactggt gtttgcttcc agGTAATAGC AGTGAGTGCC 9637360  
CGCCTCCAGG AAATGCTGAA GATGACACTG TTTGCTTGGG TCTTGGCAAG 9637310  
TGTAAGGATG GGAAATGCAT CCCTTTCTGC GAGAGGGAAC AGCAGCTGGA 9637260  
GTCCTGTGCA TGTAATGgtg agcagtttta ttcccagtcc agcagcagga 9637210  
gaaaacatgg cctttgtctg ccaggctccc ttcctccatt tggaggttgt 9637160  
gcgaatgaca gcagtgggta gatccaagcc gaggatgagg ggatggggaa 9637110  
gggcagggtg gtgtctggag acaggcatct ctgcatgcag atccaccata 9637060

cctgggagac ctatcctggt ggtgtttctt cttgctgcag tttcaggcca 9637010  
tatggcaggg tttgaggtgg gagaggaggg aattttgttg ggggtgagtg 9636960  
ggtgggtagg tagaggtgtg tcctagcctt cctctgctcc atatcataca 9636910  
aaccacaaaa gcagcagtag ctatctacat tacattggca tggaaactagg 9636860  
atactcctgc aacaactcca ccagagagag ctgattccag gacctaacc 9636810  
cactagatga ggatttttgc agttatcaag aaggctgggt ctgctcccct 9636760  
ctgatctctt agagcagcct ggggcaggag cctctctcct gctggcctgt 9636710  
cagttttcct taggtttctg tgctattttg gaaccctgg gtttgagggc 9636660  
atcctcatgg actggtcagg gactggctgg actctgcttc ccacccccact 9636610  
taaaccatgg gagtcgatga gggagtctc ttgctttcaa aatagacaga 9636560  
gagccaggtg tggtgactca cacctgtaat cccatcactt tgggaggccg 9636510  
aggtgggcag atcacttgag gtcaggagt tgagagcagc ttggtcaaca 9636460  
tggcaaacg ctgtctctac taaaaataaa aaaaattagc cgggtgtggt 9636410  
agcgtacacc tgtaatcca gctgctaggg aggctgaggc aggagaattg 9636360  
cttgaacca gggggcggag gttgctgtga gctgagattg cgccgctaca 9636310  
ctctagcctg ggcaacagag cgagactcca tttcaaataa ataaataaat 9636260  
aagtaaaaaa taaaataaat aaaagacaaa gaaccggta gttaaataaa 9636210  
atcactgggt tgggaagctca ccatccatac agtggagtga ggaactcttc 9636160  
caagttcaat aatgtgtagg taaagaagat aggttgaggg cagtgtctca 9636110  
catctataat ccagcactt tgggaggcca aggtgggtgg atcacttgag 9636060  
ctcaggagt gtttgagacc agcctgggca acattgtgaa acctcacctc 9636010  
ttaaaaaaaaa aaaaaaaaaa ggtaacacgt agcagatgcc aaataaatct 9635960  
gttgtgttga atgccaagag gcttgggggtg ctctggaagg acagagccccg 9635910  
acacagtaaa agtccaagaa atattttata aattagttaa tgatgaaaag 9635860  
gttttctttt tttttttttg agatggagtc tcaactctcg ccaggctgga 9635810  
gtgcagtggc gcgatctcag gtcaccgcag cctccgcctc ccgggttcaa 9635760  
gtgattctcg tgcctcagcc tcctgagtag ctgggactac aggcaagcac 9635710  
caccacatct ggctaatttt ttttattttt agtagagatg gggctctgcc 9635660

atgttggcca ggctgttctc gaactcctgg cctcaagtga tctgtccgcc 9635610  
ttggcctccc aaagtgctgg gattacaagc gagagccact gctcccggcc 9635560  
ttttctgaaa aggttttctt tttgcttggt tttgtgttct agttgatttc 9635510  
tttttctcct aagtatgggt taattttctg gcatttctgc cattcttatg 9635460  
tatgcccaca tggctcacag atgcccgggt ttttatcctg tgacctgtca 9635410  
gagctgttct tgggaggagt tgtggagctt tggctgcagg gctcatgctc 9635360  
ctggggtcac tgagctcccc acccaagggt ggacagtgtg gtcccagctg 9635310  
ctctcgcttt cagggagcca gtgtgggccc tgaggggcac actttagact 9635260  
gaaaaaccaa ggattgaagt cagcaggggt acaagaaagt tgggacaaag 9635210  
ggaagcattt agaagagcat tgtgaggggc ttgaagggga gagaatagtt 9635160  
agactttgaa gagaggctt gaatctagaa tggatttttc tctgcatttt 9635110  
tttttaaacc ttgtggcctc tgtcactgaa ggctgaggag tgtgacctca 9635060  
gaaactactc cttggtgggg gctatggata gtattagcta tttaaataaa 9635010  
aaataaatgt gatttcttac ctctttggga gcatggtcag ggaggaaaga 9634960  
ggaggcagga ggagaggcag gtctcagaac aatccagctg tcaatgcgtg 9634910  
ttctctgttc cagAAACTGA CAACTCCTGC AAGGTGTGCT GCAGGGACCT 9634860  
TTCTGGCCGC TGTGTGCCCT ATGTCGATGC TGAACAAAAG AACTTATTTT 9634810  
TGAGGAAAGG AAAGCCCTGT ACAGTAGGAT TTTGTGACAT GAATgtgagt 9634760  
atztatgtac agctttttct gtaacagcca gataggaagt ttttattttg 9634710  
taagtacttg attttgcaga tgaaaacaaa tcaaaacaca agtggggcta 9634660  
catccttctg gccattgtt atctacgggt attacttagg aggagaagac 9634610  
ggagtgttt caggtccctg cctgtagttt ccttctgtgg tgggaggctt 9634560  
tgagcccaga gactgagaag gactgggggt gggactttat ggtaaagtgt 9634510  
gttggtttca ggcagtgggt cctaattatg ttttcctaga ttacttacag 9634460  
aactgactaa gattgcaaaa ttattcaggg tgtgattttg aaacaggtgc 9634410  
tgaatgagta ggaaagacct agaaggctgc ttgacttact taagccagac 9634360  
ccttttgttc tctagagaag cataattttt ctcatgcaga atgatgggag 9634310  
agggttttaa gatttacgag gcttcacagg gagtctggct gtgtttgtca 9634260

ctgtccactg tgtatgtgta gagtccttac tggaatgcct catctttagc 9634210  
aaactgggtt ccttgattht tgtctcctgg taattctaaa tcacttgtaa 9634160  
aaatggagta attatgaaag tgtaaatgac agatgttcta ctttcttggg 9634110  
tactcattac gcggaagtta ttgccttgtg tcaaagatgg gaaaacgttt 9634060  
gattttaatg aagcccttta catgtcagtt atttttataa agctacattg 9634010  
cttctgaata cattgtgttt gggaaatgat ctgtatgtat gttttttctt 9633960  
catagGGCAA ATGTGAGAAA CGAGTACAGG ATGTAATTGA ACGATTTTGG 9633910  
GATTTTCATTG ACCAGCTGAG CATCAATACT TTTGgtaggt gatttcccca 9633860  
gattacttac tgagagctga gtcaatttct gtgatgacat tagaaaagtg 9633810  
tgctttcaga gtgatgtgct ttaattctgc agtagaaggt ggaactattc 9633760  
acagctttag ttatgaaaca actttgttgg ctagaataaa atgaaactcat 9633710  
agatagtctg tccccgtgga gcttggatgc acagattttc tgacaagggg 9633660  
aataaagtca aaatactggc ttccttcttt acccaaaaat atccatgtga 9633610  
ttagcataag catagtttaa tgctatagac tgaatcctga ttgatgtaag 9633560  
agtgtttatt tgactgaatg ctatatactg aatcctgctt gatgtaaaaag 9633510  
tgagcctcat attttgcaga agcagggtat atcatgttgt cacgagtcca 9633460  
taatttaatc acaaaaataa tatccaggta acaaaaactt tgtcttctta 9633410  
agcatttact agtagtagca ttccatatta atctgttgac acagctactc 9633360  
caggtaacat gttgaatatt ctgcaatctc ttcctgtcag ccagtatatg 9633310  
agggctatth ctttaaaagc acttggatg gagagatggg gtggtgtaat 9633260  
acaggcagca cagacattct gctctcggta gtatgtctag ccagcagctc 9633210  
tggcatttga cacaatggta atatcctaag agcatttcac tttagatttg 9633160  
tgaagtactt ggtcaagaca ttaactgttt ggaattgttc acagGAAAGT 9633110  
TTTTAGCAGA CAACATCGTT GGGTCTGTCC TGGTTTTCTC CTTGATATTT 9633060  
TGGATTCCTT TCAGCATTCT TGTCCATTGT GTGgtaagtc atcaacttht 9633010  
aagtaattaa atgttttatt taaatthtga tcaactcaa ccatgtaatc 9632960  
tctggaaaag gtaaaaactg ttcttagcaa agthtggcct gatatttcca 9632910  
atagctthtt ttgttgttat tcctagggga acatgtcttg tagaaagctt 9632860

aactaatggt cttttaaaaa aaatactatt tttgtgtgtt ggtgttttaa 9632810  
tatataaatt tcttaggaat tttatacttt taagcatagg agactgttta 9632760  
actggatttg tccaggtcct ttgatgagta aagcccttat tgaagagcat 9632710  
tttcaggctg acttcgttgc aatagagcaa atatcaaaca tcggcatttc 9632660  
agatgttccc catatatcat gtagattatt ggcagcagat ggctatgtct 9632610  
tcagccttct gcacaaatag gatgtaggga ctggggccca gctgtcatat 9632560  
agagtattta catcttcccc aaaaaataag agtaagcagt cttttctgtt 9632510  
ctcattcaga atcagtaaca gctacaagtt gaattgggct ttgactaagg 9632460  
aactcctggt cctttataaa tttgaggccc tttttcataa atgttcttac 9632410  
gaatccattc acttgcattc gtggggaatg gggatttgtc tgctgtagag 9632360  
atgagaaagt cacaccagg cttccagact tgttttccca aactcttca 9632310  
tagtggcctt cctatgagca tttaaaaatt ccagcacaac tctgatgaca 9632260  
aaggagtttt tcctactgcc tccttccttt cctttcctgc tggcttctcc 9632210  
tgcctagggg ccatctcaca gagcagctct tcctcagggt ggtgagcatg 9632160  
atgggtatag gaagatctct aggagcact tgtgctgaag aaagctgaag 9632110  
gtgacgtgct tgaagctttg acagatgtct ctggatgaca gtgccatcca 9632060  
tcacgattgc ttctattgga ggatggaacc tattttgttt acagggaaagt 9632010  
tgcacatgtg gacaaggcac gacccttgat ttcagagcaa agcctccgat 9631960  
aggagggagg gccatggcct gtttttggtc atagaatgca ttgatggcac 9631910  
ccagacagga agcctagtcc tggattcttg gtccttgccc tctgtcacct 9631860  
attatgcttc agccacaggc agggatgggg cagcagatgg ccatgtgggt 9631810  
agccttctgc agaagtagga tgtagggatt gaggcccagt tcctccagca 9631760  
gagcatggtc cacagaaact gtggagacag ctaagagagt gaggccatgg 9631710  
gccggggcag tgcaagaat gctgcaggcc cagccacctg ggtcttccta 9631660  
ccagttgccc ttccagtcag tgcggtcctg gtgtaccag catctgggac 9631610  
atgtgtcatt tcatgcacag gaagatgcct ttattattcc cctgcccaca 9631560  
gagggataaa tttctcagaa aacatagcac ttaaaccttg cctctttctg 9631510  
tacttaacgc caaaatgat ttcctttgag tgcaaaggaa acacttctag 9631460

actggtggca taactaaagc ttgggtgaga aatggattgt catctgttga 9631410  
gcctgctatc actttctaca actcaggttc taagttcttc agttagtgtt 9631360  
aggaatagcc tgtgatgaaa tagtactcac taactgaatt gtattttag 9631310  
ggaatgacct tcttgctgtt tctttctagG ATAAGAAATT GGATAAACAG 9631260  
TATGAATCTC TGTCTCTGTT TCACCCCAGT gtaagtatac catatgaaag 9631210  
aaacataatc ttcgcctggt ctgaggccct gttaggcaaa gaccttcacc 9631160  
tgaccagca agagctttca ctggctgatg gaaggtcatg ttgcagcagg 9631110  
aagggtctag gttggaatgt ttacccttct gacaacagtg atggtgaact 9631060  
tcgattagtt gcatggatgg acatttaaag agctgtgctg tccccttccc 9631010  
aagccataag gagtgattta gccattcaac acttagttaa tattttgagt 9630960  
tcaatttctc tcttgggatc ttaccttgag aggtttgaat cctcttttgg 9630910  
gtcttcaaat ggtaagtaag ttttcaggat gcttgaaagc tagtaattac 9630860  
tgtttttggc attaaaagta atggcattaa ttacttttgc accaacctag 9630810  
tatttttttag tcacttaggt tgagtgagcc tcacctagca cttttttctt 9630760  
agcatcacag tgccaacaga ataagaggct gtttgatggg taagggtgga 9630710  
gctgtgagga cctccgattc atcttttatt cctatcaatc aattgaacct 9630660  
atgtctttgc agAACGTCGA AATGCTGAGC AGCATGGATT CTGCATCGGT 9630610  
TCGCATTATC AAACCCTTTC CTGCGCCCCA GACTCCAGGC CGCCTGCAGC 9630560  
CTGCCCTGT GATCCCTTCG GCGCCAGCAG CTCCAAACT GGACCACCAG 9630510  
AGAATGGACA CCATCCAGGA AGACCCAGC ACAGACTCAC ATATGGACGA 9630460  
GGATGGGTTT GAGAAGGACC CTTCCCAA TAGCAGCACA GCTGCCAAGT 9630410  
CATTTGAGGA TCTCACGGAC CATCCGGTCA CCAGAAGTGA AAAGGCTGCC 9630360  
TCCTTTAAAC TGCAGCGTCA GAATCGTGT TACAGCAAAG AAACAGAGTG 9630310  
CTAATTTAGT TCTCAGCTCT TCTGACTTAA GTGTGCAAAA TATTTTATA 9630260  
GATTTGACCT ACAAATCAAT CACAGCTTGT ATTTTGTGAA GACTGGGAAG 9630210  
TGACTTAGCA GATGCTGGTC ATGTGTTTGA ACTTCCTGCA GGTAACAGT 9630160  
TCTTGTTGGG TTTGGCCCTT CTCTTTTGA AAAGGTAAGG TGAAGGTGAA 9630110  
TCTAGCTTAT TTTGAGGCTT TCAGGTTTTA GTTTTTAAAA TATCTTTTGA 9630060



CCTGTGGTGC AAAAGCAGAA AATACAGCTG GATTGGGTTA TGAATATTTA 9630010  
CGTTTTTGTA AATTAATCTT TTATATTGAT AACAGCACTG ACTAGGGAAA 9629960  
TGATCAGTTT TTTTTTATAC ACTGTAATGA ACCGCTGAAT ATGAGGCATT 9629910  
TGGCATTAT TGTGTGATGAC AACTGGAATA GTTTTTTTTTT TTTTTTTTTT 9629860  
TTTTTGCCCTT CAACTAAAAA CAAAGGAGAT AAATCTAGTA TACATTGTCT 9629810  
CTAAATTGTG GGTCTATTTT TAGTTATTAC CCAGAGTTTTT TATGTAGCAG 9629760  
GGAAAATATA TATCTAAATT TAGAAATCAT TTGGGTTAAT ATGGCTCTTC 9629710  
ATAATTC TAA GACTAATGCT CTCTAGAAAC CTAACCACCT ACCTTACAGT 9629660  
GAGGGCTATA CATGGTAGCC AGTTGAATTT ATGGAATCTA CCAACTGTTT 9629610  
AGGGCCCTGA TTTGCTGGGC AGTTTTTCTG TATTTTATAA GTATCTTCAT 9629560  
GTATCCCTGT TACTGATAGG GATACATGCT CTTAGAAAAT TCACTATTGG 9629510  
CTGGGAGTGG TGGCTCATGC CTGTAATCCC AGCACTTGGG GAGGCTGAGG 9629460  
TTGCGCCACT ACACTCCAGC CTGGGTGACA GAGTGAGACT CTGCCTCAA 9629410  
AAAAAAAAA AAAAAAAAAA ATTCACTATC TACAAACCTA GAATATTTAA 9629360  
AATACAAAGA TTGCCGTGTTT TCAAACACTA TTGAATAAGA GGGTGAGATA 9629310  
TTTCTTAACA ACAACAACAA CAAAAAAAC AGGTTGTTTTT GAATGTGATG 9629260  
AGCCAGCCAG GAGATAGAAT ACTACCTGCC CTTAGGGTTG GGGGCTGTCC 9629210  
CCACAAGACT TGATACTTCA GAAACCCTTT TTATTGACCC ACAAGCAGAT 9629160  
ATTTGAATTA CTTCTTACTT TATTGCTCCA GGATTCTGGA TGGGCTGCAT 9629110  
TTACTGTGTG AAGGATAAAA ATCATTAGCC TGGATTCTGA TTTCTATAAA 9629060  
TTGCCATTAA AAGCTTTTTT TCCCCTAAGA ACTGAAATGT GCTCACCAGC 9629010  
CAAAACATTT TAACTTGTA ATTTTGAGGG CAGTTAACCA AACCTGTGAC 9628960  
TAATCATATC TCCTCCTACC CCCCATTTCC AAGGACATTT GTTACTCAGA 9628910  
TACTTGTTAT ACTAATACTT GAACCTGTAC CTTATGGTAT TTGCTATCTT 9628860  
TTAACTAGTC ATGATATTCT TATACTTTAG TTACACTTTT GGAATTTGAT 9628810  
ACAAGGTTGA GTGGGGTGTG TGGGTGTATG TATGAGTGAA ACAGTTCTCA 9628760  
AAAGAATGTA AGAAAAACCA TTTTTATAAA ATTGTGACTT TTTAAAAACA 9628710  
TAGTCTTTGT CATTTATAGA ATTAACAAGC TGCTCAGGGT ATATTTTATA 9628660

GCTGTAGCAC TGATATCTGC ATTAATAAAT ACTGTCGAAA CACAA<sup>tg</sup>ggac 9628610  
ctaagtataa aacttccctg aaaaatcatc taataactttt attattaata 9628560  
tcagtggcaa aggtttaagc ctgaggaaaa aagcgtacct ctacgtattg 9628510  
acaactttga gttctgtaga taacaagcag atttgggtct cctgtgattg 9628460  
gctaattggtc tccatctccc agcagactta attcaggttt tgcttctgct 9628410  
acatcccgcc agtaaggaag cagcaaaggt agagaagaga cctttttctc 9628360  
tatcaaaggc cagagatgcg agaacaaaaa ttcattcccc tttggagaca 9628310  
aatgtagtcc atctgataaa taagatgaga agtcctagaa gggagagaaa 9628260  
tcggttaaag gtgggtaact ggccacgtgt ggtagctcac ccctgtcatt 9628210  
ccaacacttt ggggccgagg attactggaa gacaggagt tgagaccctg 9628160  
tctctacaaa aaattttaaa aatacaaaaa ttagctgggt gtggtggcaa 9628110  
acacctgtat tcccacctac ttgggaggcg aagatgggag gatcacttaa 9628060  
gccagaggat tggaggctac agtgaggat cattgcacca ctgagttcca 9628010  
gcctgggtga tagactgtct cccccacag cgcgcgcgcg cgcgcgca 9627960  
cacacacaca cacacacaca cacacacaca cacacacaca caaaaaggcc 9627910  
ggggaggagg ggtataactt ttctaaatgc cagtgtgtac cattctctca 9627860  
tttgtggccc tgcgacagaa atatcaccag ccctttcat tgtaggcatc 9627810  
tgaccagagg tgtcttgac tacagtagca ctgatgtgct atttacgtag 9627760  
gtgtttgaac acacagagaa ccctgactag tgctatagt ctgtctccat 9627710  
attatagaat tgagtttcat gaaagtcact caccattaag tgagctggga 9627660  
cctcattcca ggtcttctga atcatatgac atgattctca ggta

**ADAM17 (NC\_000002.11, GRCh37) - gDNA - 2025-04-02**

