



Lexicon Genetics Incorporated – Genentech Project Materials

Genentech ID:	UNQ 873	Date of Submission:	1.23.04.
Lexicon Contract Name:	DNA130	Mutation Type:	☒ Standard Knock out
LexVision Name:	PRT300N1		☐ Conditional
Reference accessions:	ENSMUST00000028790, NM_033615	Is this gene X-linked?	No

Required Materials: ☒ pKOS clone DNA(s) 75, 91
☒ Target Vector DNA 75
☒ Targeted ES Cell DNA 2H10
☒ Genomic Map

Southern Blot Analysis: *External/Internal Probe Strategies*

	<u>5' External</u>	<u>3' Internal</u>
Name of Probe:	13+14	11+12
Restriction Enzyme for Genomic Digest:	BamHI	SpeI
Predicted Wild-type Band (kb):	8.5 kb	6.4 kb
Predicted Mutant Band (kb):	6.6 kb	11.4 kb
Probe Size:	119 bp	166 bp

PCR Strategies:*For standard knockouts, give wildtype and mutant-specific strategies**For conditionals, give 5' loxP and cre-excision strategies*

Wild type-specific (absent in targeted allele)		Mutation-specific product (absent in wt)	
5' Primer Name:	3	5' Primer Name:	Neo3A
3' Primer Name:	15	3' Primer Name:	16
Predicted Wild-type Band (bp):	306	Predicted Wild-type Band (bp):	none
Predicted mutant band (bp)	none	Predicted mutant band (bp)	499

5' loxP strategy		Distinguish Cre-excised and wt	
5' Primer Name:		5' Primer Name:	
3' Primer Name:		3' Primer Name:	
Predicted Wild-type Band (bp):		Predicted Wild-type Band (bp):	
Predicted mutant band (bp)		Predicted mutant band (bp)	

Primer sequences:**Southern probes**

DNA130-11 5' – GTAGCACCTTGTACAGAC
 DNA130-12 5' – GTGAGCTTGCATCAAAGG
 DNA130-13 5' – GTCTAGCTCCAGGTAAAGG
 DNA130-14 5' – CAGACTGCTAGATCTCATG

PCR Genotyping

DNA130-3 5' – CAGGTCAGATCGTCATCTTC
 DNA130-15 5' – GTGCTACGTGAACCCATACACTG
 DNA130-16 5' – CACTGGCATACTTGCAGACTG
 Neo3A 5' – GCAGCGCATCGCCTTCTATC

Genomic Sequence Deleted:

CCTTCTTCCGCAAAGGGGGCGGTCTTGCCTCTCCAACACCTCGGCGCCGGGGGCTCCTGGTGCTGCCCAGCCGCTGCGG
AAACGGCTTCTTGAAGCAGGAGAAGAGTGC GACTGCGGTTCTGGCCAGGTCAGATCGTCATCTTCGTCCTTGGGGTTC
AAGGCTAACCCATGCTCCCAGCCTTTCCCAGGTCTAGCTTGCTCCACCATCACGTGTTCTGTTCTCTCCTTTCTGACTTCA
GAAGTGCCAGACCCCTGCTGCTTTGCCCACAATTGCTCCCTGCGTGCGGGGGGCTCAATGTGCCACGGTGATTGCTGT
GCGAGGTGCCTGGTGAGGATACTGGGGAGCGCCCTGTACATCTTAGCTGGGCTGGGACTTCTAGTCCCTTTTCTGAGTG
TGAGTTTGACCCAGTGATGGGTTACGTAGCACTCCCTCGGGCTTTACGCAAAGATCTCTCTGCTTTCCCTTAATGGGT
CTCTGGTGATGTTAAAGTCCGCGGGCACGCCTTGTCTGCTGCTGCGACTGACTGCGATCTCCCCGAGTTCTGCACCGG
CACCTCCCCGTATTGCCCCGCAGATGTTTACCTACTGGATGGCTCACCTGCGCTGAGGGTCGCGGCTATTGCCTAGAC
GGCTGGTGCTCCACGCTGGAGCAGCAGTGCCAGCAGCTATGGGGGCTGGTGAGACCGCACGCTGGTCCTGGTGCCCT
GACCAATACTAAAACCTGCGGTTTTCTACTGAGGGCAAGCTCCACCCGTGGAAGTGAAGCCCCGAGCTGCCCCGCTTCTTA
CTCCCCCTCCCCCAGGGTCCAAGCCGGCCCCAGAGCCATGTTTCCAGCAGATGAACTCCATGGGGAATTTCGAAGGG
AACTGTGGCCAGGACCACAAGGGTAGCTTCTGCTTGTGCTCAGAGGTGAGGTGTGATGCTGAGGGTCTGCAGCTGTA
AAGTAGGGCGGAGCATGCGGAGGGAACACTCCAAGTTGTTGACCACCTTCCACTTCTCCCCAGGGACGCTCTGTGTG
GGAACTGCTGTGCCAGGGAGGGGAGCCGAACCCACTAGTGCCGCACATAGTGACTATGGACTCCACAATTCTCCTAG
AGGGCCGCGAAGTGTTTGGCCGAGGGGCCCTTTGTGCTCCAGATAGTCACCTGGACCAGCTTGACTTGGGTCTGGTAGA
GCCAGGCACCGGCTGTGGACCTAGAATGGTGAGCCCTGCCCACCCAACCCCT

Genomic Locus: (the deleted sequence represents nt14214-15449 in the sequence below)

AGCCATTCTGTTTCAGAGGTTCTGAAAGGCACAGTCCCCCTTACATGGTAAACTGAGGAAGCCAAAATTTGGCGTTCC
CTAGGTGTCTTACTTACTGTTCTTTTGTGCTGTGAGGAGGAGACACTATGACCAAGTTGACTCTTATAAAAGAAAGCGTTT
AGCTGGGGGTTTGCTTACAGTTTTAGAGTGTTAGCCATAATCATCATGGTGGAAGCAGGAAGACAGAGATAGAGAT
AGAGGGAGAAAGAGAGAGAGACAGAGACATAGACAGACAAATAGATGATAGATAGATAGATAGATAGATAGATAGATA
TAGATAGATAGATAGACAGACCCTAATGTGCCTTTTGAACCTCAAAGCCCACCCCAAGTGTATCTCTCCAACAA
GGCCACACCTTCCCAGCTGTTTCACTGAGTAACTGGGGACAAAACATTCAAACATATGGGCTTATGGGGGCCATTCTCATTCAA
ACCAACACACTTGTAGGATAAGGGCATGTGACAGAGGCATCTTTGTACAGGGTCTGGCCCTGGAAGAAGTAACCTCA
TCCCGTTCTCTGTTACCCACAGCTGTATCAGCTCTTTCAAGAGCAAGGAGCAGGCAGGGATGTTACCAGCATCCTTGC
TCCTACTCTGNN
NN
CCTTCCCTTCCCTTCTCTTCCCATTTCCCTTAGACCAGGTCCCATGTAGCCCAAAGTCAATCTCATTACAGATG
ACCTTGAACCTTCAGATCCTCAGTCCCCATTTCTTTTTGTGCTGAATATCGTATTTTCTCTGGGAGCCTGTCCAGTATTTT
CCTCCAATAAATTTCAATTCAGGATACAACCTGGAGTCAATTTTCTTCTTGCAACCAAAATGTCTAGGCTAGAATGTGGA
GAATTCAAATATTAACGCTAGTGTCTCAGACACCATCTGTGGGCATGTGGCCAGGGAGCATAAATCGCACAGTGCTTG
CTTCATACTGTCTGCTGAAGTCATCCGGGCCCCCTTCTGCTCCTCATAGCTCCTCACATGATAACTCACGGGGTGGGCTG
CTCGCTCACAGGGACTGGCACAGGCTTGGCACATGGCAGGTGGCACATGGTTCTTGATAGTGGTTGAATAGAAGCACA
GAAACCCAGCTCTACCAGAGGCAAGACAGGGAGAGAACAAACCAAGATGGCAAGATGTTCCAGGATGACCGAGAGC
AAAAGCCACACCTAAAGGGTGGTGGCTGCTGAGGGTTTGGGGACATGTGACTTGAATCTTTGCTCTCAAGTACTTCAA
GAGGGATGTTGGAGACTACTTGGGGTGGGGCTCATTGGGGCCAATCTTCAGTAGTCTAAAGCCCCTCAGAAATAATTAC
TTAGCTGTAATTCAAGCACAATATATACACATGGTAAGTGTATTAGCAAAATGGCTTTCTATGTAATATAAATAAGATA
AAAAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAACAAAC
AGTGCTAACTTCACTAATCAAGTTAATTTAAATCAAAATCAAAATCAAAATCAAAATCAAAATCAAAATCAAAATCAAAAT
ATACAAATGGTATCATATTTTAAACATGAGAACATTGTGAGATGACTAGCCAGTGTCTGTCTGTCTGTCTCTCTCAGATA
TTTATTTATTTATTTTATGATGTAGGTACACTGTCACTGTCTTACAGACACACCAGAAGAGGACATTGGATCCCATTACA
GATGGTTGTGAGCCACCATGTGGTTGCTGAGAATTGAACTCAGGACCTCTGGAAGAGTAGTCAGTGCTCTTAACCACTG
GGCCATCTTTCCAGTCTTGACCAGTGTCTCTTAATGGTGAAATATTCTTCCCTTGGCCCTAGCATTTTATCCTTGGGCATT
TTCTCAGGAAAAATGAAGGCGGTGTACCCTGAGATTTGTACTAGGATGTTTACATAACAGTGCTACCCATCAGCCAGGA
ACTGAAAACAATAAATGCTCGGCAGCAGGGGAATGACCGAGTAGACAGAGCTACGCCCACACAGCTATGAGAGCTGT
GCCTACAGCTGAGTGTGGTTCTCAGACGGTCAGTGGGAGGGGCTGGCAGCGATGGCTGCCTGTGGCAGTTACATGTCCT
ACCGCTCTATTAAAGGAGCTAACAAAGGCAACCTTAAGGAAGGAACATTTATTTTGGGTCACGGTTAGTAGGCACAG
TCTCAGAGTGGTTGAAAGATGGCAGCAAGTGTCTCTAGCTGAGGGGGCAGGAGTGGGAGGCCCTGGTCACTTTGTGT
CGGCGAGGAAGCAGACAGAGAGGTGGGGGTGCCGTTTGCTTCTTACTTTCTCTTCTACCCAGTCCAGGATGACAGAA
CATCAGGTATTGCCACCCACATTTGGAGTGGGTCTTCTGGTCTCTGTGTTAAACTCTCTGGAAACACCCCTCACTGACCTGA
TGTGCCCGGAACAAGGTGATTCTCAGCCCAAGCAAGTTCACAGCGAAGACCAAGGACAGGTATAGTTAAGGAATGGGA
TAGAAGTCAATACAACAGCCACTGGTGGGCAAAAGGGATGGGCGGGAGCCACAATGGAGATTCGAGAGCCAGGGAAG
TGAGCAGGTTACATTTGTGAAAATCTCACATTTCTGAATCTATATTTTGGAAAGAAAACCTTAATTTAAAAAAATCTGCC
ACTTTTCTACGCCTTGTGCTGTGTATCGACATGGGAGGATACCTTGAGGCCAGGAGACTGAGATCAGCCTGAGCAACA
CAATAAAACCTCATTTCTTACAAAACAGAACAAATTTGGGTGTGGAGGTGCACGCCTTTAATCCCAGCACCCAGGGAGC

AGAGCCAAATCACCCCTTGTAACCATCTCAAAATTTCAGACCAAGGGGCTGTCTAGCGGCAGAAAGAGTCCATGGAACACTGT
 GACCATAGTCATACAATTGGAAACTACTTATCGACAAGAAIAAATGGCCATAGGTAATAGGCAATAGGTTGGGTAAAA
 CTCACAAATTGGGAAAATACAACCCATACTCCAGACAAGGGCCAATCGCCTTTAAACATAGAGGTCTTTAAACTGTTA
 AAAGAAGGACCAACCACTCACTAGAAAAATGAGCTACACATGAATATGTTACTATATTTAAAAAAAAAAAAAACCTGT
 GTCTAAAACAGCAGCTTATGTAAGAAATTGGTAGTAGTGGCTTTCTGTGGGGAAGGAGTACCCAAAGGATGGAGACTA
 AAGGAAGACTCTCCTAAGCATTTTATACCTTCTCCCTTGTTTGCTTTGTTGTAGTGGTGGTGGTTGTTTTGATTCTTTTT
 TGTTTGGTTGGTTTTGGTTTTTTTCAAGACAGTGTTCCTTGTGGAGCCCTGGTTGTCCTGGAACCTCACTCAGGCTGCCCT
 TGAAGTCAGAGATTCTCCTGCCTCTGGGCTTAAAGGTGTACCTCACCCTGTCAGGCTTGGGTTTGTTTTTGAGACGGGG
 TCTTGCTGTGTAGCTCCAGCTGCCTCTGAAGTGCTAGAATTACAGACATGAAGTACAGATATCTCCCAGTCTCCTCTCAT
 TCTCCCTCCCTGCCCCCTTTGTATACACATTACCTGTGTGTGCATGTGTGACTCACTCTGAGTTCTTCCAGTGTTACTCT
 CCATCAGATTTTTTGAGATAGGGTCTCTTACTGAACCTGGACCTCAAACATTTGCCTGTCTCTGTCCAGTCCAACACTTG
 GCTTACAAGTTTGTGCAATGGTTCTGGCTTTCTCTGATTGCTGGAGACTTGAAGTCAAGAACCAACGCAGGTCTTTACT
 TACTAAGCCTTCTCCTTGATGACACCCCTCACCCTGCTGCCACACACCAGGTCTCCAGGCTGATCTCACACTTTTTCCAT
 ATAGGACTTTGAACTTGTCTTTTGCTCTCTGTCTGGGATACAGGTGTGTGCTGCTACACCCAATTTATGGGATGCTGGGG
 ATGGAAGTCAAGGGCCCCAATCTGTATCAACTGAGGTGCGCTCGCTCTCTCGCTCTCATTCTCTCTCTCTCTCTCTCTC
 TCTCTCTCTCTCTCTCTCTCTCTCCCCCTCCTTCCCTTCCCTCTCTCTTCCATGAGACTCTTTCTATTTATGACAGGG
 TAGCTATCTTGAGTGTCTGTCTGATCCAAATTGCTGACCTATCATACTGTTTTCTGTTTTTGTTTTGGTTTTTTCGA
 GACTGGGTTTCTCTGTGTAGCCCTGGCTGTCTGGAACTCACTTTGTAGACGAGGCTGGCCTCGAAGTCAAGAAATCCGC
 CTGCCTCTGCCTCCCGAGTGCTNN
 NNN
 NNN
 TTTTACATTCCATATTCTCAGAACGAAATTATTAATCATCTTATTTCAAAGTTAAATCTCTTGCTATCCGAAATCATACC
 AAGTGTACGAAGTGATCTTTTTCAACACGAAAGCAATGTCTTAAATTTGGGAAAGGGTCCCTCATGCCTGGGGGTCTG
 TGGTATAGAACAATTCTGTCTGGCCATCGCTGTTCTCTGCCCTGTGCCACCCTGCATTGCCTTTACCAGGAACCA
 AGACTTCAGCAACGCGGCCACCACAAGACCCCTAGGTACCCAGATGCATCTCAGCTGCAGTGGGACAGCTTCACTGCT
 GTGGGACACTAGGTGCAGGTAGACAGATCCTGGGTAGAAAGGAGAATCCAGATGTCACTAGGGAGACTGCGACCAGA
 GATGTGTGCTAGGCAGACAGAGCAGCTGTGGGGATCACTTAGCTAGTGCCTCTATTACGACCAGAGAGGTTCTCTAAG
 AACCTTCCCGGACTTTCCGCCCTCGCTCCCTTGGCCAGCGTGGATAGGATTGTTGCAGATAACGCCAGGGAGGGTGCAT
 CCTGGCTCCCGCAGCGCGGACTCCTGTTTTGCGGGCCAGGGTAGGGCCACACTCCTGCGCTCCTGTGAGGTGCGCGAG
 GCGCGCTGAGGGCGGGAGGAGGCGGCCCTCTAGCCGGGGTGAGGCCAACAGCACAGCAAGAGTGAGAGGGAAAGG
 CACTCCCAGCCATGGGCTCGAGGTGCGGGAGACCCGGGGGGTCTCCGGTGCTGCTATTGCTGCCGCTGTTGCTGCCCTC
 GTGTCCGCTGCGGAGCGCTCGGATGTTTCCAGGTGAGGATACAGGCGGCGGGGGGGGGGGGGGGGGGGGGGGGGCTCT
 AGGGCAGGGTGAAGTGGTGGTGGTCATGGGTTCCAGTGCAACTACAGAACATAGAGTTCCCGACCTCGGCTACCTGG
 CCAGGACAGGATGTGGGAAGGGTCTGTGCTCCTGGTAAGGGTTGGCCCTGGAGCAGACTTGCCACACTTACTTAGCA
 AAGCAAATAGGCAACACTACCCTTTCCTCAGTGCTGCCAGCTCTGTCCGGAAGCTTCTGCACTTCCAAACTGCCAGGC
 CAGAGTGTCTCCCTGCTCCTGGAAGGACCTGGGGTCTTGGAGTCTTGGTCTGCCACAGGCCTAGCTGTCTCATTCGG
 CTCGTCCTCTTCTCATGCTGGGTCTGGGCAGTGTGTATGGTGTTTATACAGTTGCCTTATGTGGCAGTTCTTCAAACAG
 GGTGTCTGCCATAGCCGTGCCTGGGGCTACCACCTTCTCTCTCTACTGTAACCTCTCCTTACTCCGGGACGACAGGGCTCT
 TAGCATCTCCAAGCCTGTAGGTGAATCTCAAACCTCCACATGACGAAGCACTAGGCTGGCCAGAAGGCAGAAGGACCA
 CCGGGGAGGAGGCAGTAAGGGCTGAGGGCTGGATATTGGGCAGTCTGGAAACCACCCCATATCTGTTGACTGCTGCTT
 CCGTAAGGCTTCTGAGGGGGCTGACTGACAGCTGTATTGCCTTTAGCCTGCGGATAGTTAATGGTGAGGAGAGAGAGC
 CTCTGTGTTTCTAATGCAGACTGGCTTCTCAGTTTCCACTTTAGTCCACCGGACTCCTAGCTTGCTCCTTCTCTGTCT
 TGCAGGGCTGCACAGAGAACACTCACACCTGAATCCTTATCCTGCACCTTGGTAATCCGAGGCCAGCAAGACTTGGTT
 CTCCATACTCAGTTAAGCCTTCTCTTGGCGGAGAGATCTTTAACCTCCAGGAAGGCTTCTCTGTCTTCTCTTCTCTCTC
 TCCCTTCTCTCTTTCAGCCTCCATTCCAAAGCCACACTTGCACATCCCACTTGCACATGGCTACTAATTACGAAGCA
 CATGTGACTTTAAGGACGAGGTTCTTGGAGCTGCTGCTATTTAGATTTTGAATAATGTATATGAGCGTTTTGCCTGCACA
 TGCATCTGTGTACCGCGGAGGTACCAGGAAAACCTGGGGGGCCGGAAGAGAGAGGCGGATCCCCTGGAGCTGGGGTTAC
 AGATAGTTATGAGGCACCATGTGGGTGCTGAGAACTGAACCCGGTCTCAGGAAGAACAGCGAGTGCTCTCAATCCCC
 GATCCACCTCTCCAGCTCCCATTCAGAAATCTTGATGTCTGGGATCTAGGGAGGCGGTGGAACAAGGAGCTGGGATGA
 CCCAGGAAGGGCTGAGCCAACAGAGCTCTCCACTCAGGCAAGGCCAGAGCTGGAGTGGCTGGGGTTTTCTATGTTTTTTT
 CTTTTTTTTTCTGTAACCTGTGCCAACTGGAAGATGCAGCGGCAGAGGGATAAGTGGGCTTGCTGCTATCTCTGCAGG
 AGCTTGGCTCCTGCAGGATAGGTCCTGTGAGTGTCTTGGGACCAGATAGGAGAGGGGAGGTAGGAACATTCTGAAG
 AACATTCCAACACCGTCTGAGTAATGCTTGGCTCCGATTCTTCTCTGAGCCCTTGGAAACGCCTGGCCCAGGATCA
 CTGAGCCTCTGAACCTAGCTCCTTCAGGTTCTGGGCCAGGTCCGTCAGAGTCCCAACACCAGCATCAACCCTAATGGG
 AGTCAGGAGCTGTGGGACAGACATTTGGTGGCTGTCTTACTCAGATGGCAAAGGAGGCCTCCAAACACCTCCCTCACC
 ATAAAGGCATCTACTACCCAGTCTAAAAATACCCAAGGCTGCCTCCTTCTTCCAGCCCTCTGCGCTGGGTCTGGGC
 TTCTTCCCGGAGCTCTGACCTCAAACAGCTCTCTAAGCTCTGGCCGTTCAAATCCCAATGGGATGGGTCTCTGTG
 GCCTCGGTTTTCTTTTTGCCACCTCCCTGTGCTTCTCCATTAGGGGATGCCCCATGAATACCAATCTTGAAGTGC
 TACACATGGAGTCCAGCTTTCAGGACCCCTCCTTCCCCGATGGCTTCTGCTCCTAACTGCAATTTTAACACTATTCTCT
 GCTTTCACCCCGAGGAAATGCCCATGGAGAGCTAGTCACTCCCCACTGGATCCTGGAGGGCAGACTCTGGCTCAAGGTC

ACCCTGGAGGAGCCGTAAGTATCCGTTATCCTGTCCTTATTAGGGGCCCTAGGTCTCCCGCTCTCTGTCCTTTCCCCCA
AATGCAGCGTGACAGTTTTTCTGGGGTTCTCAGAACCAAATCACTGTACCGTTAAGCCACTCCCTGTTGGGTGGGTGGG
ACAAAGAGACATCTAGATGGCGTGAGGCTGCACACATGGAAGTCATTTTGGGCTTCCTCCCTCCCACCCCTTCTATTCT
CTGGCCCTAACCCTCTTCTCCATGGGGGAACATTGAGGCCATGCCACTCAACTAAGCAAAGATGAGTTCATAGTTTGG
GGCTAAAGCCTTTCAGGAGAGCTCTGTATTCTG
TTCTGTTTTGTTTTGATTGAGACAGGGTCTTGCTATGTAGCTCTGGGGGGCTTCAAGTCATGAGCCATCATGCCAGCCAC
AGGAGATTTTTAAAGAAGGACACCAAAATGTCCTCTTTGGCCGTGTTTATGGGGAACATGTGACTCCGTGGACATGCT
GCTGTCCTGTAACCTCAGCTTCCATGGCTGGAAGCCACCTGGGACAAGGAAGCTGTGGGCCATTCTCCTCCTGTCCCCA
GATGTATTCTCACTCTGGTTTGCTTCTCCAGAGCCCTGCTCAGCCTCCTCCTAACTTCTGCTCATTGTGTTCCCCCAGAAG
AGCCATGTGTGCCTTCACTGCTTCGCTGCCCCATGGGAGGCCGGCACTGATCCGCCTGGCTTACAGAGAGGCAAGCGA
GCCCCACAGAGCTTGTAAAGTTGCTCATGTTGAATAGTTTATTGGGCCTAGAAACCTGAGGCTCCGTGGGACCTAAGG
GCTTCAGATGATTGGCTGCCTCCCTCTTTCTCTATAAATACTCAGGCTGGAGAGAGTTCAATTCTGTACCTCCTGACAG
AGGGCAGCCCCACTGTCCAAACCTAGAGTGTGCAACAGTGAGGATGCATTCCCAGAAACCTAAACCTTCCAAGTCAG
GGCCTTCACTGGGGTCCCCCAGACTTCTAGGACTTCTCTCAACCAAGCAAAGATGGCTTGTGGACATGCACGGGTTCCT
CTGATGGTGGCCTCTCTCCTTGCTGGCTCGGTCTGTGAGAGAATCCCAGGGGGACTCTGCTCTGCGTTAGGAAGCCTG
TGAGGCCAGGCCAGGAAGAGCTTTGGCAGGGTGTGTGTATTTACAAACAGGGTTGTAAGTGCAGGATGGGGATGGTGC
ACAAAGGGGGAGGGAGACCCTGGAGCAGAAGTAAAGGCAGCAAGGGCCGCAGAGGGAAGGGACCTTCCACTGGGGC
TACTGCCTTTCTCCCAGAGCAGACATTTTCCATAAAGCAAGAGGCACTCCAACCATATAAGCTCATGTTTGGGCCCTT
GTGGAGCCTGTGGCTGGGGAAGTGAGGGCCATCTTCTCTACACCTGCTGCAGAAGGGCCCTGAAAGATTCTTGGCCAG
GGTCCCAGCCCAGTGCATTTTGGGATAAAAAGGGAAAGCCATCGTGGGTGGGGAAAACATTTAAAAAATAACAG
CAGCCTCCCCTGGAATCTCTTGGGCTAGTTCCAGTTCTGGCTTCTAGCCAGGCTAAGTGGACTAGCCTGAGAGAGACCA
AGTCAGTGAGAGAGGAGAGGTGGCTAGAGGGCCAAGGCCAGCCCTTCTGACATCTAGCTAAGAGAGTCAACACTTTTT
AGGGAGCCAAAGTTGGGTTTCATGTTTACTTCATGAGTTCAGTTATGAGGCCAGCTCAGAGGAATTCAGAGGATCGGG
CAGTTTGTGCAACTGAAGGTGGAGGAAAAAGTTTGGGTTCTCTCAGGAATGAGGGAAAGGCAGCAAGATGGAGAGA
TGTGCAACCAGGAGCTGTGGATGCAGCTGGGTGATTTGGTGCTTGCTTGGCATGTGCAAGGCCCTGGGTTTGATCTATA
GCACCCACAGCAAACCTAGCAAGCAAGCAAACAAGCATACAAACAAAACAGAAGCAAGGTTGCAGGTAGTACAAGAGA
TGGCCAAAGCTGTAGCCCACCCAATGACCCACATCACCTCAGTGCCCACTGCCTCCTGCTTTTCTGCTTTTTCATGGG
GCTCCTGACTATGGCCATAGCATATGTCCATAGCAGACATAACAACATATGCCAGGCAACGTAGCAACTGCTATGTCCG
TATATGGTGGTTATGCATCTTTAAGGGTCCGTTGTACAAACACAAGCACTGAGAACATCTCTAAGTTACAACCTCCAC
ACATATCCACTCCCTGCAATGCGAGAGCCAGCTGTTTCTATGAGCTTTTCTCACTAGGCAGCTCTACATCCTACCGGTTCC
TGGGCAGCCAGGTGGCCTTGGGGCCTAGTGTGTCACTGCGTTCCTTCTCGGTGAGATCTTGAAGCCTGACTCGGTGCTG
GTGGCTTTAGAGGCTGAAGGCCAGGATCTCCTGCTTGAAGTGGAGAAGAAGCAGTGAGTACCAGCGGGGGGGTTGCTG
AAGTCCAGACAAAGACCCTCTCTGGAGAGGATCAGTGCTTTCTGGGAGGGGGTTGGGGGCTGGGTGGGAAGCAGCAGT
GGGAGTGACAGGGAGAGTGCGGATGTACTTGGGGCTACAGTGGAAGTGAACCCAACTGTAGGAAGTACATACCTGGTC
ATCTCATACCCTGGAGCAGCTGGATGGGCGGCTCCCCGCTGGAGAAGAGTGAGCACCAGAACAGACATTGACTGATAC
CTTAATTCAAAGGGAATTCTTAGGCAAAAGGGAACCTCCACAGATGGCAGAGAAAGAAAGAAAGAAAGAAAGAAAGAAAG
GGTGACAGTTTCTGCTTACCTGGAATGCCTCCATCTGCGTGGAAGAGAACAGAGACATCTGGTCTACCTGGAATGC
CTCCATCTGCGTGGAAGGGAACAGAGAGGAGAGGGCTGGGGTGGGGGGCTTCCCAGTGGGGGCCGATCGAAGAGGGCA
TCTTAGTGCTAAAGATCTTGGATGGACCTAAAGAGTCAAAGAACGGGAGGTGGTAAAGGAGAAACACAGTGTGGAAG
GAGTGAGAGGGTAAGCAAGATGGAGGCGTGGAAGTGCAGACTCCACCACCAACCACACCACTCGCTCATGTCTGCTT
TCTTACGGACATTGCAGAAGGCACTCATTCATTTTATTCTCTCCATGGAATCAGACAGACTGGGAACAAACTGCAAACA
CCACGCCAAACCACAGTTCCTGACAGTGCCACATCCCTTCTACTAAACGGTCTTGTACATGTGTGCACACATTGAACG
TTAGCATGTATGAGTGCAGCCAGCAAAGCAGCAGAGTTGTAATGTGTGTAAGGATGGCTGGCCGTACAACAGCCTGGG
TTTTTGATGGAGGACAATGTGAATTTGGAGTCAGGATTTTCTGTAAGGAAGAGCAATTGAAGTCAGGCATGGAGGTAG
AGGCCTGTAAGTCCGGCTCCTCTGGGCAGGAGAAACACAGAGTCAAGTCAGGGACTGCCTGAGTTATAAAGAATGAGT
TCAAGACCAGCCTAGGCAACTTAGCAAAATCCAGTCTCAAAATATAAAGGAGTGAGGAAGAGGGAAAGAGAAAAAGA
GGGAGAAGGAGAAGGAGGAAAAGAAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGG
AAGAAAAGCAGCTATTTATTTATGGTTGCAATGTTCCCTGGTGGGGACAGGGAAGAAGCCTGAAAATGGAACATTACT
GATAGAGTCTAGCTCCAGGTAAAGGGACCTTCCCCGGGTGGCTGAACAGAAGCAGCTACAGGCAGGTGGAAGTCGGA
AGTACGCATCACTGAGGGACAGATGGAGACATGAGATCTAGCAGTCTGAGGAGAACTGGAGGGCCTGGGGTCCGCTCA
GCAAAGGCAGGAGTACCCTGGCCCTACTTGGCCTCTCTGAGGTAGTATCTCCTGGCACACACACACACACACACAC
ACACACACACACACACACACACACCTGCCTGCAGCAGGCTCCACAGCACCAAGGTCCCCAGCCTGTCTTCTGGG
TGCTTCCCACACTTCCCATCCCCTTGACTAACCCACCTCAGGACTCGCTCCAGACCTTTGTCTTCTTTTTGCCTGAGGTTT
TCTCTTTGAGGCACAGTGTCTCCTTTCTCTCTGACACACTGAATGCCTCCGCTAGCACTCAGGGAGGAGAGCTGGAAGC
AAGCGGCAGGATGCAGGTCTAAATCCAGTGACTCCTAACCCTCCCCCTTCCAGCAAGCTTCTGGCCCCAGGATACACA
GAAACCCACTACAGGCCAGATGGGCATCCGGTAGTGCTGTCCCCAACCACACGGTGAGACACTTTCATGGGATCTGA
GAACATGGGGAGGGTGCAGCCTCAATGCCTACCCTGTCTGTTTTGCATTCTAAGGAGGTTGTAGTCTGCCTTCAGGC
CCCCTTCTCCTTGTCCCACCAACTTGAGCTCCTACTCAGATGTGGGTATGAGCCTCTTCTCTCTAGGATCATTGCCA

ATATCACGGGCGTGTGAGGGGCTTCCGGGAATCCTGGGTGGTTCTCAGCACCTGCTCTGGGATGAGGTAAGGCGTTGG
GGGAGAGGGCCTGGGGCTGCGGCAGAGGTGAGCGCTTCCTGTTACACATCCTTGCTATCCACTGCACTCTAGTGGCCT
TATTGTGCTCAGCAGCAAAGTCAGCTATTATCTGCAACCTCGGACTCCTGGGGATACCAAAGACTTCCCAACCCACGAG
ATCTTCCGGATGGAGCAGTTGTTACCTGGAGAGGGGTCCAGAGAGACAAGAACTCCCAATACAAAGCAGGAATGGCC
AGTCTTCCTCATGTCCCCCAGAGCCGGGTAAGGGGTACAGACTAGAGTGGGACTGGTCTTCAAAGCAGAGGACACAG
GAATGCGGGTCTGGACGGGGTCTCCCTGTTTTAATTCAGAGGCTGAAGAATCAAGTTTGAGCAGAAGTTTAACTATCC
CCTCCCCTGCCCCGGGGGATCACGGTGTGTGGCCAAGGATTCCGTCAAGCAGCCTGCCCCCACCATTGCTCCTCCCA
GGTGAGGCGAGAGGCGCGCAGGAGTCCCAGGTACCTGGAAGTGTACATAGTGGCTGACCACACCCTGGTGAGGAGAG
ACCTAAGAGGTCTGACTGGGCTGGGCGGGAGCCTGCTCAGCACCGTTATGACCCAGGGACCTCTCTGCCTTCTCAGTTC
TTGCTTCAGCATCAGAACTTGAACCACACGAGACAGCGCCTCCTGGAGGTTGCCAATTGCGTGAGCAGGTTGGATGAT
TAGGGCGCTGAAGGTTGGGAGTGAGGCAGTTGAAAAGCTCTGGTGAGTGCCTGGTTCTGGCTTCAGCAGGTCTCTCCC
TCAGATTCTCAGGACTCTGGATATACAGTTGGTGTGACCGGGCTGGAAGTGTGGACCGAGCAGGATCTCAGTCGCATC
ACTCAGGACGCAAACGAAACGCTCTGGGCTTTCCTACAGTGGCGCCGCGGGGTGTGGGCCAGGAGACCACACGACTCC
ACACAACTGCTCACGTGGGTGCCATTTACA
CACCCCGGTTGCGGGATGTCCTTATTTCCAACTCCACCCAGTCACGCCCTGCTCCATCATCCTTAGGGGCGGCACCTTCC
AGGGTACCACGGTGGGCCTGGCACCTGTGGAGGGCATATGCCGCGCGGAGAGCTCCGGAGGTGTGAGCACAGTAAGCT
CTGCTGGGGACCTAGGAGGAGAGAGGTTTGGGTAGGGTTTGTGGTCTCAGTGAAACCCGGCTCCTCAGGACCACTCG
GAACTCCCCATCGGCACAGCAGCCACCATGGCCACGAGATAGGCCACAGCCTGGGCCTCCACCATGATCCCGAGGGC
TGCTGCGTGCAGGCCGATGCAGAGCAAGGAGGCTGCGTCATGGAGGCAGCCACAGGTTACGCAAAGAAGGTCGTTGTT
ACCGGACCTAGACAAAGCGACTGCGTTTTCTTTGGTTACCCCTCAGTTCCCTCTTTAGTAAAGATAACAGCCTGCTAATA
GGGCCTCGGTGGGAAAGATGCTGATAAGGTGGAGTCTCAGAATGACTGCGGGACTAGGGTACTCCACTCTGATCCTTG
GTCCTCCTTGGGGCCCCGACTGCCCGATTTTAGCGTCACAGCCTCCTGTCTCCAGTTCCTAGGCTCCTCTCTCTCTCGAT
TGCTCGCTTAGCTTAGAAAGAAACAGCACATCTTGAGGGCTGTGTGGCTAACCTCAGGGCCCAGAGTGCAGAAGTAGC
CTGAGCTTAGGAGGTGGCTCCAGCACCCGAGATGGTCCCCACACCACCAATGACATCCATCTTCCATCTGCAGGCACCC
TTTCCCGCGCGTCTTCAGCGCCTGCAGCCGCCGCCAGCTGCGCACCTTCTTCCGCAAAGGGGGCGGTCTTGCTCTCC
AACACCTCGGCGCCGGGGCTCCTGGTGCTGCCAGCCGCTGCGGAAACGGCTTCTTGGAAGCAGGAGAAGAGTGCGAC
TGCGGTTCTGGCCAGGTGAGATCGTCATCTTCGTCCCTGGGGTTCAAGGCTAACCCATGCTCCCAGCCTTTCCCAGGTCT
AGCTTGCTCCACCATCACGTGTTCTGTTCTCTCCTTTCTGACTTCAGAAGTGCCAGACCCCTGCTGCTTTGCCACAAT
TGCTCCCTGCGTGCGGGGGCTCAATGTGCCACGGTGATTGCTGTGCGAGGTGCTGGTGAGGATACTGGGGAGCGCCC
TGTACATCTTAGCTGGGCTGGGACTTCTAGTCCCTTTTCTGAGTGTGAGTTTGACCCAGTGTATGGGTTACGTAGCACT
CCCTCGGGCTTTCAGCAAAGATCTCTCTGCTTTCCCTTAATGGGTCTCTGGTGTAGTTAAAGTCCGCGGGCACGCCTTGT
CGTCTGCTGCGACTGACTGCGATCTCCCCGAGTTCTGCACCGGCACCTCCCCGTATTGCCCCGCAGATGTTTACCTACT
GGATGGCTCACCTGCGCTGAGGGTCGCGGCTATTGCCTAGACGGCTGGTGTCCCACGCTGGAGCAGCAGTGCCAGCA
GCTATGGGGGCTGGTGAGACCGCACGCTGGTCCCTGGTGCCCTGACCAATACTAAAACCTGCGGTTTTCTACTGAGGGC
AAGCTCCACCCGTGGAAGTGAAGCCCCGAGCTGCCCGCTTCTTACTCCCCCTCCCCCAGGGTCCAAGCCGGCCCCAGAG
CCATGTTTCCAGCAGATGAAGTCCATGGGAATTCGCAAGGGAAGTGTGGCCAGGACCACAAGGGTAGCTTCCTGCCTT
GTGCTCAGAGGTGAGGTGTGATGCTGAGGGTCTGCAGCTGTAAAGTAGGGCGGAGCATGCGGAGGGAACACTCCAAGT
TGTTGACCACCTTCCACTTCTCTCCCCAGGGACGCTCTGTGTGGGAAACTGCTGTGCCAGGGAGGGGAGCCGAACCCACT
AGTGCCGCACATAGTGACTATGGACTCCACAATTCTCCTAGAGGGCCGCGAAGTGGTTTGCCGAGGGGCCTTTGTGCTC
CCAGATAGTCACCTGGACCAGCTTGACTTGGGTCTGGTAGAGCCAGGCACCGGCTGTGGACCTAGAATGGTGAGCCCT
GCCACCCAAACCCCTCCTGGTTATTGAGTCCCTCCATGCCAAAGTGTCTCCTCACTGCCAGTGGGCACAATGCCATA
GGTGTGCCAGGACAGGCACTGTGAGAATGCTACCTCCAGGAGCTGGAACGTTGCTTGACTGCCTGCCATAACGGTGG
GGTGAGTAGCCTAAGGGGTGAGGGTGACCTTGAGGTCCTTGCTACCTGGTGACTTTTCTATCCTCATCTTAGGTTTGCA
ATAGCAATCGTAACTGTCACTGTGCTGCTGGCTGGGCTCCACCCTTCTGTGACAAGCCTGGCTTGGGTGGTAGCGTGGA
TAGTGCCCTGCACAGTCTGCAAGTATGCCAGTGGGGTGGGGGCAGGCAGGAACCACCTGGGCAGTAGCCTGCTTGAG
ACTCAGCACCCCTGCCCTCCACAGACCGAGATGCCTTCCCTTGCCCATGCTCCTCAGCTTCTGCTGCCTCTGCTCCCT
GGGGCTGGCCTAGCCTGGTGCTACTACCAGCTCCCAACATTCTGTATCGAAGGGGACTGTGCTGCAGGAGGGACCCC
CTATGGAATAGGTAGGTTCCGTGCTCAGGTCTCTTCTCCTGAGCCTGCCCCCATGGCTCCTGCTTCTCAGAACTCTTCAG
GGCTTTGTAGAGTGAGAGGCTACAGGGAGCTGGGGCTTAGGAAGCTAGATGGGATCCTTATTCTCTAGATGTAGTGA
GAGCTCCCAGGCTGTGGGAAGAAGTCCGTGGTGTGTATCACTGCCCTGACCAGCACTTGGTGGTGTGGTCTTTCCATG
GGCTTCCCTTGATTTTTTTGTTTTATGTTTTTTGTTGTTGTTGGTTTTTTTCTGCTTTAAAGAAATTCAACACAGCCTGTGC
TCCGCTTTGTCTGAAGACGACTCTAGCTTCCTTGCTCAATATCAGCCATCTCCCATGGCCTTTGCCCTAATTACTCCCT
TCAGGTCCCTCGGTGCTAGCCAAGGACCCCTTTGTGCTCCCTATAAACTGGCCAGCTATAGTGTTGCTCTTTCTGTGCCA
GGACTCTGTGCCTCTGTCCCCTGTAGATCACAGTGCTGTAAACCCAAATTTTCTGGCAGGCAGAAATGCCACCTGATAGC
ACACATTATCTACCGAGGGCAGCCTCCTCACTAGGCCCCCTCGGGCAAGTCAGGCACATTATGTCCCTGTCTGAACTTGG
AAGTGTCTAGACCAATTGAGGGAAGGGCAGGGTTGGGTGGAGATGTGACTAGAGGGCACCTCAGGCCAGAAACAG
CACCAGCAGGCCCCAGGAGCCAGTGAGACGGTCTGGGGAAAGCCAGGTAGTGCCTGGGGGTGGGGGCGGTGTCTGC
AGACAGGGAAACAGGTGGAGTGACAGTTGGGAGGGGGCACTTCAGAGGGGTGGCAGCTGCACACCGTTATCGGGATA
GGGTGTCAAGGACAGTGGAATATCTGGATGAACCATCCAAAGAAATGGCAAGGTCTGTGAGAAAGTCCCCGCGAGTT

CAGAGTCTAGACTGGCAGAGCACGGCTAAACGGAGCATGGGAAGGCACAGTTCCCACCAAGGGAGACATCTCTGCACT
TCAGCTCTAGGTGGGCCCCCTCGGTGACGCCTACATCTAGACTGAGTGGGGGCTGGAGTGGAGTCACCTCGGGAGAAAGG
ATGTCCACAGCCCTGGAGGCCCTGGGACATAAGTGAGGTCTGGACATCTTAAGGACAGAACAGGAATGTGGAATTCGA
AGCTTGAGTGGAAATGGAGAAGCAATCCCCCTTTGTCTCATACACGGTCACTTTCCAACCTTCTGAACTCTTATCTGGTCT
GTCACTGGCCCCCTGCAGAGACATAACCCCTGGGCAGTGTGCATCCGGTGGAGTTTGGCTCCATCATCACTGGAGAGCCCT
CGCCCCCTCGTAAGTGTGCCCCCTTGGGACATGGAGAGGGAAGCAAGGGGTGGGTGCTTGCCATCTGCCTCCTTCTAAAT
GCTCTCCTTAACACACCTTTCAATCCTCTGCCCTGCTCAGCCCCATGGACCTCTTGCCAACAGCGTTTCGCACCCTCCATCT
CTTGACTTGCTCTCAGACCCTGCGAACTCTGAGCTTACCTAAGAACTACCCTCTGAAGCAGCCTGGTCTACAGATTGAG
TTCCAGACCTGCCCTATCCCTATGGTATGGAAGCACCCCTGAGGACCTCCTGTTGCCAGTCACCTACCTCTGTCTCAGTT
TGTTGTCCCCCTCCTCAGATTTACAGGCTTGCATCAATAAAGAAATGAGACATGGGCCCTCAGAGAACTGTTGTATAGA
GACCATGCTGTGAAGCCCTAGGGGCAGGGAAGGGAGACACTGTGGTCTCTTGGGTCCTTATAGAGGGGAGGACAA
ATGTGCCCTGCCATGTGACTTGCAGTCTCAGTTTCTCAGACGCACCTTATAAATTCCTATGGGCTGTATGCTGAGCTCT
TACTCAGCATAGGAACCCAGAGCCCGATCATGTTGTATCCCGCCTGCCCTGAGAGCTGTGCTATTCTGAAATGTTAGA
ATGTATCTAATAACAATAAATCCACAAGTTATATCAGTGTTGTTGGCTGTGACCTGTTAAAAGGGTCTAAGTTGTTTATT
AAAAAGATATGGAGATGGATTACTGAGAAAGAAATTAGAAACAACATCTGGACAGTGGAGGAGCCAGCACTGGGGAG
GAAAGGGCAGACAGATCTCTGAGTTCAAGGCCAGCCTGGTCTACAGATTGAGTTCCAGGATAGCTAGGGCCACACAGA
GGAAACCCTGTTTTGAAAACCAAACAGTCAAATAATAAAAAACAACTTAGTAGCACCTTGTACAGACAGAGAGAAAGG
TTCCAGGAGAGCTCAGACCCAGCACCCAGAGGTGGCAAGGCAGAGTCTCAAAGCCCAGGTGGCAAAAAGTGGGATCT
GTTAGCATAAAACCCAAAGGGCGCGTGGGACAGGCAGGGAGTACCCTTTGATGCAAGCTCACTCTGGTGAGGGCCCCCTC
ACCCCTGGATGTCTGTTAGCAAGGGAATCAGTCAGTGTCTCAGTCTGTTAACATCTGTGAGAGGGGAAAGGCTGCTGCA
GACATGGCCTGAGCAGCATCTGGATTGCAACATTTGCACTTTAGGGCCTGCTCTCTCCCCTGGGTGGGGCACTCGCCAT
TCATTGCCTTTACGACAGCTGTGAGAGAGAGGTTGCTGCAAGTGTGTATGGCTGGGTAGCTCGAGCCCACCAGGCAAT
CATGATTTCCCTCGACATCTAGTCATTAACAAACACAGGTTCTTTTACTACAATTTTAACTACCAATATTAATAATAAT
GTGTATAAAATATATAACACAGTACACATATATAAGTACATAGATGTTAGTACATATAAATATTATATATATATATA
ATTTTAATTAATATTACTTAATTTTATTTTATCATTTGATATTATTTTACTGTTAGTTATAACAATGTGCATAATATATGT
GTAATATAAAATATAATTTTATTATTTAATATTATTATATAAATTTAATTAATATTAATTATACCTATATATTTAGTACAT
ATACATAGGTTACAGAATGGCTACAAAAGTGCCAGGAGCCATCAAGGAGAAGCTAAAAGCCAGCAAGTGATCTTCCTG
AGACGGTTCTGCCATGGACTGTACAATTAGTGATGGATTTGCTTCTGTAGGCAAGGACGAGGAGATTTCAATTTTAGGAA
AGATTCTGTCTATTAATATGCTTTTCTGGTATTATTAATATATATAACAATCACTAGGTATTAGCCCACCGTTTTGAA
CAGAATGTTCTGCAGAACATGAAGATGTAATCTCTTGTAAATGATGCTATATAGACAAATAGATTATTTCTTTTTTAAAA
AAGAAAAAAGAGCCGGGCGATGGTGGCACATGCCTTTAATCCAGCACTTGGGAGGCAGAGGCAGGCAGATTCTGAG
TTCAAGGCCAGCCTGGACTACAGAGTGAGTTCCAGGACAGCCAGGGCTACTCAGAGAACTCTGTCTTGGAACAAAAA
AAAGAGGAAGAAAGAAAAAAGATTTATTTATTTATTTTATACATATGAGTACACCATCAGACACACAAGAAGAGGGCA
CCAGACCCCATACAGATGGTTGTGAGCCACCATGTGGTTGCTGGGAATTGAACTCAGGACCTCTGGAAGAACAGTTG
GTGCTCTTAACCCCTGAGCCATCTCTCCAGCCCAATAGATGATTCTTAATTCTTAAGGATGATCCTATAAGAATTCT
AAACTTACATTAGTAATTATTAAGCTCTTTTACAATAGGACTTCTATTAACTCTTCTAATATGAAAACCTTCAATAA
ACTCTGCCAGTCTTCAAGTGTCATGAGTTAGTTGCTTCTGAGATAGCAAGTAGGCATCAACAACCTTAGAGCACATTCTA
GGAGGTTGTAAAACCATTAACCAGTGGTCTTAAAAAAGGGAACATAACAATAGGCTATAGGTGCAAGGACAGAAGATAA
AATATTGACTAGGTTTATCAATACAAAATTTACCCACAAAAGTTATGTTTTTGACTTTTCATAAAAACTCTTTATGAACC
TGTAGAACTGGTGAAAGATGACGAATGCTTAGCCAGATAATTACTCCTAATAGATATGCATGTGAATATTCTGTGCTGT
AACTTATTTATGTTTGAACCTTCCAGTGAACTTTTGTTTAAAAAAGGGGGGGGTTGAAAAAGCCATGTGATCTATTCT
CCTAGAAAGGGTACAGAAGACTAAGAAAGATTACATTGGAGATGTAACCTTGGAGAGAAAAGCTTTGGGAGCAAGAGC
ATAGAGAGCAAGGCCATTGTGGCATCAGAGCAGGAGGAGAGAGCAAGATTAGAAGGAGAATGCAGAGTGGAATAACT
TAGAAACTATAAGGCAACATAAAAAATTAAGAGAGCCATATGCAGAATGCAGAGGGAAAGAGAAAAAAGAAAAA
AAGAAGCTGCAGGGAGAGCAGAAGGAGCAGGCAGGCTTCTCCTGACCATGGGGTAGAACAGGGCTTTTCTTAATACCA
AGGCAGGCTTAGTCTTAAGGATAATAAAGCTTTTCTTTCTTACAGACTTGGTTTTAATTCATTTAGCAATAAAAGTGTA
AAGTGTCTTTCTTTCCCTATGCAATAAAGATTGGAGCTTATTTTTTACGCCAGAATGAGTGAGTTCTCTCTGCAACGGTGCT
TGGTCTTTTGCTTCATATACACACATAAGTGTGTGTGTGCGCGCATGCGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT
AAGTGTGCAATTATCAGATGGCATGGAAGCTGGGCTCAATTGGTTCAAATGGGGACTTGTGAGGGTATATGCATGAAT
CTGTATATGAATTCATGTGAGCTTATATATATTTGCTTGTGTAAAAGTTTTCTTCTGTGAGTGTGACTCTCTTCTCCTG
GTTCAATAGAGGTTTATTGCTTCAAACCTTCCCCCTAGCCTGACAGTCGAGAGGCATCTGGACAAGAGAGAAAAGGCTCT
AGCCATTAATCCTTTTCTTAGATCCATTTTCTTAGAGAACTTTCTTAGGAACTGTTTAGAGAGAACATAGAAAACAGGCT
GAAATCACTTGTCAAACTGTCCCCCTTTTCTTCTAAGGACTTCTACTAGCAGACTGGGAGTTAGAGCTGCACAGTCCCTG
AGGAGATAGAACAAAGGCTGCTTTACTGAATCCCCTGCTGTTTTAAGATGAGGTTCTAAAGGAGATTGCAGTTTCTGAC
CCCCAAAAGGAACTCAGGCAGGTCAGCTACAGTATCAAAGTGACTTAAACTTAAAGATAGGGAAATGTTTTATTATTAA
ACAGCAACCCTAAATATCTCATAAGATCAAGTCTTACCCCGGCTGACACTTCCCCCTCTGTTGCCTCAAGAGGAACCAA
GCAGAAAGAACCGCCAGGGCTGGCTCCTGGCACAAATGGGTAAAGATGTTGTAGCATGGGGAAATGAAGAGATGGC
TCAGCTATTAAGAGAATATCTTACTCTTCCAGAGGACCAGTGTTCAATTCCCAGCAAACATATCAGGTGCCACACCATC
ACTTGATAGCTCCAGCTGCAGATCTGCTACATCTGGCCTCCATAGGCACCCACACACAGGTGGCACCCACAATTAAAAAA

ATAAGATAAATCTAAAACAGCAAAGTTAAAGCATGAGCTGAAACTAGTAAAGTGCTTGTGTGGCATAGACCAAGACCT
GGGTTTGGTCCCTACCTGTTAGAAATAGTCTCAGTATCACACAAAGGAACACCCAAGCGAAGCAAAAAGCTCCCAGCAA
GACAAAACCTACAGTCTTCATTGAGAGTGTGCACGCTGAAGACCGAGCACACTGGGTGCAAAATGTACTTGGATTCTGTT
TGCTTGTTTTGTTCAGACAGGGTTTCTCTGCATAACAGCCTTGGCTGTCCCTGAAATTCAGTGTGTAGACCAGGCTGGC
CTCAAACCCTCAGAGATCCGTTACCCACGCTTATCTAGGCTTCAGTCTCACCTGTGAGATGGCCTGAAAGTTGTTAG
AACCGCGCGGGATCTATTTCTGACAGACTGGCTGGCATCTTTTCTTCTCTCAGCATGAGATTCCTGGGGCGTTCCCATT
TCAGCATCAAGCATGGTAGCAGAGTTGGAACCTGAGGGCTGAGGGCTCAGACTCAGACCATAAACTGGAAGCAGAGA
GAACTGGAGATTGTGGGAGGCTTTGAAACCTCAGCTCCTGCCCCAGCAAATACCTTCCAGCAAGGCCACACCTCTTAAA
CCTCCCCAAACAGGGTCACCAACTGGGGACCTAATATTCAAATGCCCCAAAATATGGGAGACATGACATCCAAACCGC
CAGGACAGGTGTATACCTCCATGCTTGGTTTCCGTAGTAAGAAACACTAAACATTAGCCTTTCTAATAAAACACTGATA
TAAAGCCCTGCTATTCTCGATGTTTTTCTCTGTCTGTCTCTCTCTCCACCTGCTTCTCTGTTCTCTGACCTCTTCTGT
GTCACAGATAGCCCTGCCATCTGCCAGCCATGTTCTGTCTACTTGCCTCTCTCTGCTCTGGACTCTTCTAGAT
GCCTCTGGCTGTTCTTTCTCATATCTACAATAAAAACCTGGCCCTTAATCATACCACAGACAGATATCGAGTCTTCTTTATA
CAAATTTTCTTGTAGCTCTCTTAAAGGGAGATTAAATAAACAGGCTGAGCACACAGGAGGATCATGGCATATTGACTTG
CTTGTGAGGT

Selection Cassette: LacZ/Neo

GGCCATAGCGGCCATTTAAATGGCGCGCCGGATCCCGGGCCGCTCTAGCTAGACTAGTCTAGCTAGAGAATTCCGCCCC
CCCCCCCCCCCCCTCTCCCTCCCCCCCCCCTAACGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGTGCGTTTGT
CTATATGTTATTTTCCACCATATTGCCGTCTTTTGCCAATGTGAGGGCCCGGAAACCTGGCCCTGTCTTCTTGACGAGCA
TTCCTAGGGGTCTTTCCCCTCTCGCCAAAGGAATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGC
TTCTTGAAGACAAACAACGTCTGTAGCGACCTTTGCAAGGCAGCGGAACCCCCACCTGGCGACAGGTGCCTCTGCGG
CCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCCAGTGCCACGTTGTGAGTTGGATAGTTGTGGA
AAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCAGAAGGTACCCCATTTGTATGGGATC
TGATCTGGGGCCTCGGTGCACATGCTTTACATGTGTTTAGTCGAGGTTAAAAAACGCTCTAGGCCCCCGAACCACGGG
GACGTGGTTTTCTTTGAAAAACACGATGATAAGCTTGCCACAACCATGGAAGATCCCGTCGTTTTACAACGTCGTGAC
TGGGAAAACCTTGCGGTTACCCAACTTAATCGCCTTGACGACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGG
CCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTTGCCTGGTTTCCGGCACCAGAAGC
GGTGCCGGAAGCTGGCTGGAGTGCGATCTTCTGAGGCCGATACTGTCGTCTGCTCCCTCAAACCTGGCAGATGCACGGT
TACGATGCGCCCATCTACACCAACGTGACCTATCCCATTACGGTCAATCCGCCGTTTGTTCACGGAGAATCCGACGG
GTTGTTACTCGCTCACATTTAATGTTGATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATTATTTTTGATGGCGTTAA
CTCGGCGTTTTATCTGTGGTGCAACGGGCGCTGGGTGCGTTACGGCCAGGACAGTCGTTTGCCGCTCTGAATTTGACCTG
AGCGCATTTTTACGCGCCGGAGAAAACCGCCTCGCGGTGATGGTGCTGCGCTGGAGTGACGGCAGTTATCTGGAAGAT
CAGGATATGTGGCGGATGAGCGGCATTTTCCGTGACGTCTCGTTGCTGCATAAACCGACTACACAAATCAGCGATTTCC
ATGTTGCCACTCGCTTTAATGATGATTTACGCCGCGCTGTACTGGAGGCTGAAGTTCAGATGTGCGGCGAGTTGCGTGA
CTACCTACGGGTAAACAGTTTCTTTATGGCAGGGTGAAACGCAGGTGCGCAGCGGCACCGCGCCTTTCCGGCGGTGAAATT
ATCGATGAGCGTGGTGGTTATGCCGATCGCGTCACACTACGCTGAACGTCGAAAACCCGAAACTGTGGAGCGCCGAA
ATCCCGAATCTCTATCGTGCGGTGGTTGAACTGCACACCGCCGACGGCAGCTGATTGAAGCAGAAGCCTGCGATGTC
GGTTTCCGCGAGGTGCGGATTGAAAATGGTCTGCTGCTGCTGAACGGCAAGCCGTTGCTGATTTCGAGGCGTTAACCGTC
ACGAGCATCATCCTCTGCATGGTCAGGTCATGGATGAGCAGACGATGGTGCAGGATATCCTGCTGATGAAGCAGAACA
ACTTTAACGCCGTGCGCTGTTTCGATTATCCGAACCATCCGCTGTGGTACACGCTGTGCGACCGCTACGGCCTGTATGT
GGTGGATGAAGCCAATATTGAAACCCACGGCATGGTGCCAATGAATCGTCTGACCGATGATCCGCGCTGGCTACCGGC
GATGAGCGAACGCGTAACGCGAATGGTGACGCGCATCGTAATCACCCGAGTGTGATCATCTGGTCGCTGGGGAATGA
ATCAGGCCACGGCGCTAATCACGACGCGCTGTATCGCTGGATCAAATCTGTGATCCTTCCCGCCCGGTGCAGTATGAA
GGCGGCGGAGCCGACACCACGGCCACCGATATTATTTGCCCGATGTACGCGCGCGTGGATGAAGACCAGCCCTTCCCG
GCTGTGCCGAAATGGTCCATCAAAAAATGGCTTTCGCTACCTGGAGAGACGCGCCCGCTGATCCTTTGCGAATACGCC
ACGCGATGGGTAACAGTCTTGGCGGTTTCGCTAAATACTGGCAGGCGTTTCGTAGTATCCCCGTTTACAGGGCGGCTT
CGTCTGGGACTGGGTGGATCAGTCGCTGATTAAATATGATGAAAACGGCAACCCGTGGTCGGCTTACGGCGGTGATTTT
GGCGATACGCCGAACGATCGCCAGTTCTGTATGAACGGTCTGGTCTTTGCCGACCGCACGCGCATCCAGCGCTGACGG
AAGCAAAACACCAGCAGCAGTTTTTCCAGTTCCGTTTATCCGGGCAAACCATCGAAGTGACCAGCGAATACCTGTTCCG
TCATAGCGATAACGAGCTCCTGCACTGGATGGTGGCGCTGGATGGTAAGCCGCTGGCAAGCGGTGAAGTGCTCTGGA
TGTCGCTCCACAAGGTAAACAGTTGATTGAACTGCCTGAACTACCGCAGCCGGAGAGCGCCGGGCAACTCTGGCTCAC
AGTACGCGTAGTGCAACCGAACGCGACCGCATGGTCAGAAGCCGGGCACATCAGCGCCTGGCAGCAGTGGCGTCTGGC
GGAAAACCTCAGTGTGACGCTCCCCGCCGCTCCACGCCATCCCGCATCTGACCACCAGCGAAATGGATTTTTGCATC
GAGCTGGGTAATAAGCGTTGGCAATTTAACCGCCAGTCAGGCTTTCTTTCACAGATGTGGATTGGCGATAAAAAACAAC
TGCTGACGCCGCTGCGCGATCAGTTCACCCGTGCACCGCTGGATAACGACATTGGCGTAAGTGAAGCGACCCGCATTG
ACCTAACGCCTGGGTGCAACGCTGGAAGGCGGCGGGCCATTACCAGGCCGAAGCAGCGTTGTTGACGTGCACGGCAG

ATACACTTGCTGATGCGGTGCTGATTACGACCGCTCACGCGTGGCAGCATCAGGGGAAAACCTTATTTATCAGCCGGAA
AACCTACCGGATTGATGGTAGTGGTCAAATGGCGATTACCGTTGATGTTGAAGTGGCGAGCGATACACCGCATCCGGC
GCGGATTGGCCTGAAGTCCAGCTGGCGCAGGTAGCAGAGCGGGTAACTGGCTCGGATTAGGGCCGCAAGAAAACTA
TCCCGACCGCTTACTGCCGCTGTTTTGACCGCTGGGATCTGCCATTGTCTAGACATGTATACCCCGTACGTCTTCCCGA
GCGAAAACGGTCTGCGCTGCGGGACGCGCAATTGAATTATGGCCACACCCAGTGGCGCGGCGACTTCCAGTTCAACA
TCAGCCGCTACAGTCAACAGCAACTGATGGAAACCAGCCATCGCCATCTGCTGCACGCGGAAGAAGGCACATGGCTGA
ATATCGACGGTTTCCATATGGGGATTGGTGGCGACGACTCCTGGAGCCCGTCAGTATCGGCGGAATTCCAGCTGAGCGC
CGGTCGCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAAACCAGGCGAGGCCATGTCTGCCCGTATTTCCGCTA
AGGAAATCCATTATGTACTATTTAAAAAACACAACTTTTGGATGTTTCGGTTTATTCTTTTTCTTTTACTTTTTTATCATG
GGAGCCTACTTCCCGTTTTTCCCGATTTGGCTACATGACATCAACCATATCAGCAAAAGTGATACGGGTATTATTTTTGC
CGTATTTCTCTGTTCTCGCTATTATTCCAACCGCTGTTTGGTCTGCTTTCTGACAACTCGGAACCTGTTTATTGTCAGCT
TATAATGGTTACAAATAAAGCAATAGCATCACAAATTTACAAATTTAATTAAGGCCGCGGGATCGATCCCGTCGAGC
AGTGTGGTTTTCAAGAGGAAGCAAAAAGCCTCTCCACCCAGGCTGGAATGTTTCCACCCAATGTCTGAGCAGTGTGGTT
TTGCAAGAGGAAGCAAAAAGCCTCTCCACCCAGGCTGGAATGTTTCCACCCAATGTCTGAGCAAAACCCCGCCAGCGT
CTTGTCTATTGGCGAATTGCAACACGCAGATGCAGTCGGGGCGGCGCGGTCCAGGTCCACTTCGCATATTAAGGTGACG
CGTGTGGCCTCGAACACCGAGCGACCCTGCAGCCAATATGGGATCGGCCATTGAACAAGATGGATTGCACGCAGGTTT
TCCGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTT
CGGCTGTCTAGCGCAGGGGCGCCCCGTTCTTTTTGTCAAGACCGACCTGTCCGGTGCCTGAATGAACTGCAGGACGAG
GCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTTCTTGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGG
GACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCTCTCACCTTGCTCCTGCCGAGAAAGTATCCATCA
TGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCATTTCGACCACCAAGCGAAACATCGCATCGA
GCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCTGATCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGC
CGAACTGTTCCGCGAGGCTCAAGGCGCGCATGCCGACGGCGAGGATCTCGTCTGACCCATGGCGATGCCTGCTTGCC
GAATATCATGTTGGAATAATGGCCGTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC
ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCTCGTGCTTTACGGTATCG
CCGCTCCCGATTTCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGGGGATCGGCAATAAAAAGACAG
AATAAACCGCACGGGTGTTGGGTCGTTTGTTCGGATCCGAATTCTCGAGGGCGCGCCATTTAAATGGCCAGCGAGGCC

Targeted Locus:

AGCCATTCTGTTTCAGAGGTTTCTGAAAGGCACAGTCCCCCTTACATGGTAAACTGAGGAAGCCAAAATTTGGCGTTCC
CTAGGTGTCTTACTTACTGTTCTTTTTGCTGTGAGGAGGAGACACTATGACCAAGTTGACTCTTATAAAAAGAAAGCGTTT
AGCTGGGGGTTTGCTTACAGTTTTAGAGTGTTAGCCCATATCATCATGGTGGGAAGCAGGAAGACAGAGATAGAGAT
AGAGGGAGAAAAGAGAGAGAGACAGAGACATAGACAGACAAATAGATGATAGATAGATAGATAGATAGATAGATAGATA
TAGATAGATAGATAGACAGACCCTAATGTGCCTTTTGAACCTCAAAGCCCACCCCAAGTGTATCTCTCTCCAACAA
GGCCACACCTTCCCAGCTGTTTCACTAAGTGGGGACAAAACATTCAAACATATGGGCTTATGGGGGCCATTCTCATTCAA
ACCAACACACTTGTAGGATAAGGGCATGTCAGACAGGCATCTTTGTACAGGGTCTGGCCCTGGAAGAAGTAAGTCA
TCCCGTTCTCTGTTACCCACAGCTGTATCAGCTCTTTCAAGAGCAAGGAGCAGGCAGGGATGTTACCAGCATCCTTGC
TCCTACTCTGNN
NN
CCTTCCCTTCCCTTCTCTTCCCATTCCTTCCCTAGACAGGTCCTTCTAGCCCAACTGACTCTCAATCTATTACAGTAT
ACCTTGAACCTTCAGATCCTCAGTCCCATTTCTTTTTGTGCTGAATATCGTATTTTCTCTGGGAGCCTGTCCAGTATTTT
CCTCCAATAAATTTCAATTCAGGATACAACTGGAGTCAATTTTCTTCTTGCAACCAAAATGTCTAGGCTAGAATGTGGA
GAATTCAAATATTAACGCTAGTGTCTCAGACACCATCTGTGGGCATGTGGCCAGGGAGCATAAATCGCACAGTGCTTG
CTTCATACTGTCTGCTGAAGTCATCCGGGCCCCCTTCTGCTCCTCATAGCTCCTCATATGATAACTCACGGGGTGGGCTG
CTCGCTCACAGGGACTGGCACAGGCTTGGCACATGGCAGGTGGCACATGGTTCTTGTACATGGTTGAATAGAAGCACA
GAAACCCAGCTCTACCAGAGGCAAGACAGGGAGAGAAACAAACCAAGATGGCAAGATGTTCCAGGATGACCGAGAGC
AAAAGCCACACCTAAAGGTGGTGGCTGCTGAGGGTTTGGGGACATGTGACTTGAATCTTTGCTCTCAAGTACTTCCAA
GAGGGATGTTGGAGACTACTTGGGGTGGGGCTCATTGGGCCCAATCTTCAGTAGTCTAAAGCCCCTCAGAAATAATTAC
TTAGCTGTAATTCAAGCACAATATATACACATGGTAAGTGTATTAGCAAAATGGCTTTCTATGTAATATAAATAAGATA
AAAAAACAAACAAACAAAAAACAAACCAGAAATACCAGCACTTCAGAGTACCCCACTCCCAACCCCTGCCAGTGT
AGCTGCTAACTTCACTAATCAAGTTAATTTAAAAATCAAATATAATACCACAGATTTTATTTTCTCTGTGTTTCTGCTTT
ATACAAATGGTATCATATTTTAAACATGAGAACATTGTGAGATGACTAGCCAGTGTCTGTCTGTCTGTCTCTCTCAGATA
TTTATTTATTTATTTTATGATGTAGGTACACTGTCACTGTCTTCAGACACACCAGAAGAGGACATTGGATCCCATTA
GATGGTTGTGAGCCACCATGTGGTTGCTGAGAATTGAACTCAGGACCTCTGGAAGAGTAGTCAGTGCTCTTAACCACTG
GGCCATCTTTCCAGTCTGACCAAGTGTCTCTTAATGGTGAATATTCTTCCCTTGGCCCTAGCATTTTATCCTTGGGCATT
TTCTCAGGAAAAATGAAGGCGCGTGTACCCCTGAGATTTGTACTAGGATGTTTACATACAGTGCTACCCATCAGCCAGGA
ACTGAAACAAATAAATGCTCGGCAGCAGGGGAATGACCGAGTAGACAGAGCTACGCCACACAGCTATGAGAGCTGT
GCCTACAGCTGAGTGTGGTTCTCAGACGGTCAGTGGGAGGGGCTGGCAGCGATGGCTGCCTGTGGCAGTTACATGTCTT

[illegible]

AGCTTGGCTCCTGCAGGATAGGTCTGTGAGTGTCTTCTGGGACCAGATAGGAGAGGGGAGGTAGGAACATTCTGAAG
AACATTCCAACACCGTCTGAGTAATGCTTGGCTCCGATTCTTCTTCTGAGACCCCTTGGAACGCCTGGCCAGGATCA
CTGAGCCTCTGAACCCTAGCTCCTTCAGGTTCTGGGCCAGGTCCGTCAGAGTCCCAACACCAGCATCAACCCTAATGGG
AGTCAGGAGCTGTGGGACAGACATTTGGTGGCTGTCTTACTCAGATGGCAAAGGAGGCCTCCAAACACCTCCCTCACC
ATAAAGGCATCTACTACCCAGTCTAAAAATACCCAAGGCTGCCTCCTTCTTCCCAGCCCCCTCTGCGCTGGGGTCTGGGC
TTCTTCCCGGACCTCTGACCTCAAACCAGCTCTCTAAGCTCTGGCCGCTTCAAATTCCCCAATGGGGATGGTTCTTGGT
GCCTCGGTTTCTCTTTTGCCACCTCCCTGGTTGCTTCTCCATTTAGGGGATGCCCCATGAATACCAAATCCTGGAAGTGC
TACACATGGAGTCCAGCTTTCAGGACCCCTCCTTCCCCGATGGCTTCTGCTCCTAACTGCAATTTTAACACTATTCTCT
GCTTTCACCCCAGGAAATGCCCATGGAGAGCTAGTCACTCCCCACTGGATCCTGGAGGGCAGACTCTGGCTCAAGGTC
ACCCTGGAGGAGCCGGTAAGTATCCGTTATCCTGTCTTATTAGGGGCCCTAGGTCTCCCGCTCTCTGTCTTTCCCCCA
AATGCAGCGTGACAGTTTTCTGGGGTTCTCAGAACCAATCACTGTACCGTTAAGCCACTCCCTGTTGGGTGGGTGGG
ACAAAGAGACATCTAGATGGCGTGAGGCTGCACACATGGAAGTCAATTTGGGCTTCTCCCTCCCACCCCTTCTATTCT
CTGGCCCTAACCCCTCTTCTCCATGGGGGAACATTAGGCCATGCCACTCAACTAAGCAAAGATGAGTTCATAGTTTGG
GGCCTAAAGCCTTTCAGGAGAGCTCTGTATTCTG
TTCTGTTTTGTTTTGATTGAGACAGGGTCTTGCTATGTAGCTCTGGGGGGCTTCAAGTCATGAGCCATCATGCCAGCCAC
AGGAGATTTTTAAAGAAGGACACCAAAATGTCTCTTTGGCCGTGTTTATGGGGAACATGTGACTCCGTGGACATGCT
GCTGTCTGTAACTCAGCTTCCATGGCTGGAAGCCACCTGGGACAAGGAAGCTGTGGGCCATTCTCCTCTGTCCCCA
GATGTATTCTCACTCTGGTTTGCTTCTCCAGAGCCCTGCTCAGCCTCCTCTAACTTCTGCTCATTGTGTTCCCCCAGAAG
AGCCATGTGTGCCTTCACTGCTTCGCTGCCATGGGGAGGCCGGCACTGATCCGCCTGGCTTACAGAGAGGCAAGCGA
GCCCCACAGAGCTTGTAAGTTGCTCATGCTTGAATAGTTTATTGGGCCTAGAAACCTGAGGCTCCGTGGGACCTAAGG
GCTTCAGATGATTGGCTGCCTCCCTTCTTTCTATAACTACTCAGGCTGGAGAGAGTTCAATTCTGTACCTCTGACAG
AGGGCAGCCCCACTGTCCAAACCTAGAGTGTGCAACAGTGAGGATGCATTCCCAGAAACCTAAACCTTCCAAGTCAG
GGCCTTCACTGGGGTCCCCCAGACTTCTAGGACTTCTCTCAACCAAGCAAAGATGGCTTGTGGACATGCACGGGTTCCT
CTGATGGTGGCCTCTCTCCTTGCTGGCTCGGTCTGTGAGAGAATCCCAGGGGGACTCTGCTCTGCGTTAGGAAGCCTG
TGAGGCCAGGCCAGGAAGAGCTTTGGCAGGGTGTGTGTATTTCACAAACAGGGTTGTACTGCAGGATGGGGATGGTGC
ACAAAGGGGGAGGGAGACCCTGGAGCAGAAAGTAAAGGCAGCAAGGGCCGCAGAGGGAAGGGACCTTCCACTGGGGC
TACTGCCTTTCTCCCAGAGCAGACATTTTCCCATAAAGCAAGAGGCACTCCAACCATATAAGCTCATGTTTGGGCCCTT
GTGGAGCCTGTGGCTGGGGAAGTGAGGGCCATCTTCTCTACACCTGCTGCAGAAAGGGCCCTGAAAGATTCTTGGCCAG
GGTCCCAGCCCAGTGCATTTTGGGATAAAAAGGGAAAGCCATCGTGGGTGGGGAAAACATTTAAAAAATAACAG
CAGCCTCCCCTGGAATCTCTTGGGCTAGTTCCAGTTCTGGCTTCTAGCCAGGCTAAGTGGACTAGCCTGAGAGAGACCA
AGTCAGTGAGAGAGGAGAGGTGGCTAGAGGGCCAAGGCCAGCCCTTCTGACATCTAGCTAAGAGAGTCAACACTTTTT
AGGGAGCCAAAGTTGGGTTTTCATGTTTACTTTCATGAGTTTCAATTATGAGGCCAGCTCAGAGGAATTTAGAGGATCGGG
CAGTTTGTGCAAACTGAAGGTGGAGGAAAAAGTTTGGGTTCTCTCAGGAATGAGGGAAAGGCAGCAAGATGGAGAGA
TGTGCAACCAGGAGCTGTGGATGCAGCTGGGTGATTGTTGGTGCTTGTGTCATGTGCAAGGCCCTGGGTTTGTATCTATA
GCACCCAGCAAACTAGCAAGCAAGCAAAACAAGCATACAAAACAAAACAGAAAGCAAGGTTGCAGGTAGTACAAGAGA
TGGCCAAAGCTGTAGCCCCACCAATGACCCACATCACCTCAGTGCCTCCTGCTTTTCTGCTTTTCTGCTTTTCTGCTG
GCTCCTGACTATGGCCATAGCATATGTCCATAGCAGACATAACAACATATGCCAGGCAACGTAGCAACTGCTATGTCCG
TATATGGTGGTTATGCATCTTTAAGGGTCCGTTGTACAAACACAAGCACTGAGAACATCTCTAAGTTACAACCTCCAC
ACATATCCACTCCCTGCAATGCGAGAGCCAGCTGTTTCTATGAGCTTTTCTCACTAGGCAGCTCTACATCCTACCGGTTCC
TGGGCAGCCAGGTGGCCTTGGGGCCTAGTGTGTCACTGCGTTCCTTCTCGGTCAGATCTTGAAGCCTGACTCGGTGCTG
GTGGCTTTAGAGGCTGAAGGCCAGGATCTCCTGCTTGAAGTGGAGAAGAAGCAGTGAGTACCAGCGGGGGGGTTGCTG
AAGTCCAGACAAAGACCCTCTCTGGAGAGGATCAGTGCTTTCTGGGAGGGGGTTGGGGGCTGGGTGGGAAGCAGCAGT
GGGAGTGACAGGGAGAGTGGCGGATGTACTTGGGGCTACAGTGGACTGAACCCAAGTGTAGGAAGTACATACCTGGTC
ATCTCATACCCTGGAGCAGCTGGATGGGCGGCTCCCCGCTGGAGAAGAGTGAGCACCAGAACAGACATTGACTGATAC
CTTAATTCAAAGGGAATTCTTAGGCAAAGGGAACCTCCACAGATGGCAGAAGAAAAAGCTGCGAAGGTCAAATCCAAT
GGTGACAGTTCATCTGGTCTACCTGGAATGCCTCCATCTGCGTGGAAAGAGAACAGAGACATCTGGTCTACCTGGAATGC
CTCCATCTGCGTGGAAAGGGAACAGAGAGGAGAGGGCTGGGGTGGGGGGCTTCCCAGTGGGGCCGATCGAAGAGGGCA
TCTTAGTGCTAAAGATCTTGGATGGACCTAAAGAGTCAAAGAACGGGAGGTGGTAAAGGAGAAACACAGTGTGCAAG
GAGTGAGAGGGTAAGCAAGATGGAGGCGTGGAAGTGCAGACTCCACCACCAACCACACCCTCGCTCATGTCTGCTT
TCTTACGGACATTGCAGAAGGCACTCATTCAATTTATTCTCTCCATGGAATCAGACAGACTGGGAACAACTGCAAACA
CCACGCCAAACCACAGTTCCTGACAGTGCCACATCCCTTCTACTAAACGGTCTTGTACATGTGTGCACACATTGAACG
TTAGCATGTATGAGTGCAGCCAGCAAAGCAGCAGAGTTGTAATGTGTGTAAGGATGGCTGGCCGTACAACAGCCTGGG
TTTTTGATGGAGGACAATGTGAATTTGGAGTCAGGATTTTCTGTAAGGAAGAGCAATTGAAGTCAGGCATGGAGGTAG
AGGCCTGTAAGTCCGGCTCCTCTGGGCAGGAGAAACACAGAGTCAAGTCAGGGACTGCCTGAGTTATAAAGAATGAGT
TCAAGACCAGCCTAGGCAACTTAGCAAAATCCAGTCTCAAAATATAAAGGAGTGAGGAAGAGGGGAAAGAGAAAAAGA
GGGAGAAGGAGAAGGAGGAAAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGG
AAGAAAAAGAAAGAGAGAGAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGG
AAGAAAGCAGCTATTTATTTATGTTGCAATGTTTCTGGTGGGGACAGGGAAGAAGCCTGAAAATGGAACATTACT
GATAGAGTCTAGCTCCAGGTAAAGGGACCTTCCCCGGGTGGCTGAACAGAAGCAGCTACAGGCAGGTGGAAGTCGGA

AGTACGCATCACTGAGGGACAGATGGAGACATGAGATCTAGCAGTCTGAGGAGAACTGGAGGGCCTGGGGTCCGCTCA
GCAAAGGCAGGAGTACCCTGGCCCTACTTGGCCCTCTCTGAGGTAGTATCTCCTGGCACACACACACACACACACAC
ACACACACACACACACACACACACACCTGCCTGCAGCAGGCTCCACAGCACCAAAGGTCCCCAGCCTGTCTTTCTGGG
TGCTTCCCACACTTCCCATCCCCCTTGACTAACCCACCTCAGGACTCGCTCCAGACCTTTTGTCTTCTTTTTGCCTGAGGTTT
TCTCTTTGAGGCACAGTGTCTCTTTCTCTCTGACACACTGAATGCCTCCGCTAGCACTCAGGGAGGAGAGCTGGAAGC
AAGCGGCAGGATGCAGGTCTAAATCCAGTGACTCCTAACCCTCCCCCTTTCCAGCAAGCTTCTGGCCCCAGGATACACA
GAAACCCACTACAGGCCAGATGGGCATCCGGTAGTGCTGTCCCCAACCACACGGTGAGACACTTTCATGGGATCTGA
GAACATGGGGAGGGTGCAGCCTCAATGCCTACCCTGTCTGTTTTGCATTCTTAAGGAGGTTGTAGTCTGCCTTCAGGC
CCCACTTCCTCCTTGTCCCACCAACTTGAGCTCCTACTCAGATGTGGGTATGAGCCTCTTCCTCTCTAGGATCATTGCCA
ATATCAGGGGCGTGTGAGGGGCTTCCGGGAATCCTGGGTGTTCTCAGCACCTGTCTGGGATGAGGTAAGGCGTTGG
GGGAGAGGGCCTGGGGCTGCGGCAGAGGTGAGCGCTTCTGTTCACACATCCTTGCTATCCACTGCTACTAGTGCCT
TATTGTGCTCAGCAGCAAAGTCAGCTATTATCTGCAACCTCGGACTCCTGGGGATACCAAAGACTTCCCAACCCACGAG
ATCTTCCGGATGGAGCAGTTGTTCACTGGAGAGGGGTCCAGAGAGACAAGAACTCCCAATACAAAGCAGGAATGGCC
AGTCTTCCTCATGTCCCCCAGAGCCGGGTAAGGGGTACAGACTAGAGTGAGGACTGGTCCTTCAAAGCAGAGGACACAG
GAATGCGGGTCTGGACGGGGTCTCCCTGTTTTAATTACAGAGGCTGAAGAATCAAGTTTGAGCAGAAGTTTAACTATCC
CCTCCCCTGCCCGGGGGGATCACGGTGTGTGGCCAAGGATTCCGTCAAGCAGCCTGCCCTCACCATTTGCTCCTCCCA
GGTGAGGCGAGAGGCGCGCAGGAGTCCCAGGTACCTGGAAGTGTACATAGTGCTGACCACACCCTGGTGAGGAGAG
ACCTAAGAGGTCTGACTGGGCTGGGCGGGAGCCTGCTCAGCACCGTTATGACCCAGGGACCTCTCTGCCTTCTCAGTTC
TTGCTTCAGCATCAGAACTTGAACCACACGAGACAGCGCCTCCTGGAGGTTGCCAATTGCGTGAGCAGGTTGGATGAT
TAGGGCGCTGAAGGTTGGGAGTGAGGCAGTTGAAAAGCTCTGGTGAGTGCCTGGTTCCTGGCTTCAGCAGGTCTCTCCC
TCAGATTCTCAGGACTCTGGATATACAGTTGGTGTGACCGGGCTGGAAGTGTGGACCGAGCAGGATCTCAGTCGCATC
ACTCAGGACGCAAACGAAACGCTCTGGGCTTTCCTACAGTGGCGCCGCGGGGTGTGGGCCAGGAGACCACACGACTCC
ACACAAGTCTCAGTGGGTGCCATTTACA
CACCCCGGTTGCGGGATGTCCTTATTTCCAAGTCCACCCAGTCACGCCCTGCTCCATCATCCTTAGGGGCCGCACCTTCC
AGGGTACCACGGTGGGCCTGGCACCTGTGGAGGGCATATGCCGCGCGGAGAGCTCCGGAGGTTGTAGCACAGTAAGCT
CTGCTGGGGACCTAGGAGGAGAGAGGTTTGGGTAGGTTTGTGGTCCTCAGTGAAACCCGGCTCCTCAGGACCCTCG
GAACTCCCCATCGGCACAGCAGCCACCATGGCCACGAGATAGGCCACAGCCTGGGCCTCCACCATGATCCCGAGGGC
TGCTGCGTGCAGGCCGATGCAGAGCAAGGAGGCTGCGTCATGGAGGCAGCCACAGGGTACGCAAAGAAGGTCGTTGTT
ACCGGACCTAGACAAAGCGACTGCGTTTCTTTGGTTACCCCTCAGTTCCTCTTTAGTAAAGATAACAGCCTGCTAATA
GGGCCTCGGTGGGAAAGATGCTGATAAGGTGGAGTCTCAGAATGACTGCGGGACTAGGGTACTCCACTCTGATCCTTG
GTCTCCTTGGGGCCCGGACTGCCCGATTTTAGCGTCACAGCCTCCTGTCTCCAGTTCCTAGGCTCCTCTCTCTCTCGAT
TGCTCGCTTAGCTTAGAAAGAAACAGCACATCTTGAGGGCTGTGTGGCTAACCTCAGGGCCCAGAGTGCAGAAGTAGC
CTGAGCTTAGGAGGTGGCTCCAGCACCCGAGATGGTCCCCACACCACCAATGACATCCATCTTCCATCTGCAGGCACCC
TTTCCCGCGCTCTTCAGCGCCTGCAGCCGCGCCAGCTGCGCACGCTCTAGAGGCCATAGCGGCCATTTAAATGGCGC
GCCGATACCCGGGCGCTCTAGCTAGACTAGTCTAGCTAGAGAAATCCGCCCCCCCCCCCCCCCCCTCTCCCTCCCCC
CCCCCTAACGTTACTGGCCGAAGCCGCTTGGGAATAAGGCCGGTGTGCGTTTGTCTATATGTTATTTTCCACCATATTGCC
GTCTTTTGGCAATGTGAGGGCCCGGAAACCTGGCCCTGTCTTGTGACGAGCATTCTAGGGGTCTTCCCTCTCGCCA
AAGGAATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCTCTGGAAGCTTCTTGAAGACAAACAACGTCTGTAG
CGACCCTTTGCAGGCAGCGGAACCCCCACCTGGCGACAGGTGCCTCTGCGGCCAAAAGCCACGTGTATAAGATACAC
CTGCAAAGGCGGCACAACCCCAAGTGCCACGTTGTGAGTTGGATAGTTGTGGAAAGAGTCAAATGGCTCTCCTCAAGCG
TATTCAACAAGGGGCTGAAGGATGCCCAGAAGGTACCCCATTTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTT
TACATGTGTTTAGTCGAGGTTAAAAAACGTCTAGGCCCCCCGAACCACGGGGACGTGGTTTTCTTTGAAAAACACGA
TGATAAGCTTGCCACAACCATGGAAGATCCCGTCGTTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAACTT
AATCGCCTTGACGACATCCCCCTTTCCGACGCTGGCGTAATAGCGAAGAGGGCCCGCACCGATCGCCCTTCCCAACAGT
TGCGCAGCCTGAATGGCGAATGGCGCTTTGCCCTGTTTCCGGCACCAAGCGGTGCCGGAAGCTGGCTGGAGTGCG
ATCTTCCTGAGGCCGATACTGTCGTCGTCCCCTCAAACCTGGCAGATGCACGGTTACGATGCGCCCATCTACACCAACGT
GACCTATCCATTACGGTCAATCCGCCGTTTGTTCACGAGAGAATCCGACGGGTGTTACTCGCTCACATTTAATGTTG
ATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATTATTTTTGATGGCGTTAACTCGGCGTTTCATCTGTGGTGCAACGG
GCGCTGGGTGCGTTACGGCCAGGACAGTCGTTTGCCGTCTGAATTTGACCTGAGCGCATTTTTACGCGCCGGAGAAAAC
CGCTCGCGGTGATGGTGCTGCGCTGGAGTGACGGCAGTTATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATT
TTCCGTGACGTCTCGTTGCTGCATAAACCGACTACACAAATCAGCGATTTCCATGTTGCCACTCGCTTTAATGATGATT
CAGCCGCGCTGTAAGTGGAGGCTGAAGTTCAGATGTGCGGCGAGTTGCGTGACTACCTACGGGTAAACAGTTTCTTTATGG
CAGGGTGAAACGCAGGTCGCCAGCGGCACCGCGCCTTTCCGGCGGTGAAATTATCGATGAGCGTGGTGGTTATGCCGAT
CGCGTCACACTACGTCTGAACGTCGAAAACCCGAAACTGTGGAGCGCCGAAATCCCGAATCTCTATCGTGCGGTGGTT
GAACTGCACACCCGCCGACGGCACGCTGATTGAAGCAGAAGCCTGCGATGTCGGTTTCCGCGAGGTGCGGATTGAAAAT
GGTCTGCTGCTGCTGAACGGCAAGCCGTTGCTGATTGAGGCGTTAACCCTCACGAGCATCATCCTCTGCATGGTCAGG
TCATGGATGAGCAGACGATGGTGCAGGATATCCTGCTGATGAAGCAGAACAACTTTAAACGCCGTGCGCTGTTGCGATTA
TCCGAACCATCCGCTGTGGTACACGCTGTGCGACCGCTACGGCCTGTATGTGGTGATGAAGCCAATATTGAAACCCAC
GGCATGGTGCCAAATGAATCGTCTGACCGATGATCCGCGCTGGCTACCGGCGATGAGCGAACGCGTAACGCGAATGGTG

CAGCGCGATCGTAATCACCCGAGTGTGATCATCTGGTCGCTGGGGAATGAATCAGGCCACGGCGCTAATCACGACGCG
CTGTATCGCTGGATCAAATCTGTCGATCCTTCCCCGCCCGGTGCAGTATGAAGGCGGGCGGAGCCGACACCACGGCCACC
GATATTATTTGCCGATGTACGCGCGCGTGGATGAAGACCAGCCCTTCCCGGCTGTGCCGAAATGGTCCATCAAAAAAT
GGCTTTCGCTACCTGGAGAGACGCGCCCGCTGATCCTTTGCGAATACGCCCACGCGATGGGTAACAGTCTTGCGCGTTT
CGCTAAATACTGGCAGGCGTTTCGTCAGTATCCCCGTTTACAGGGCGGCTTCGTCTGGGACTGGGTGGATCAGTCGCTG
ATTAAATATGATGAAAACGGCAACCCGTGGTCGGCTTACGGCGGTGATTTTGGCGATACGCCGAACGATCGCCAGTTCT
GTATGAACGGTCTGGTCTTTGCCGACCGCACGCGCATCCAGCGCTGACGGAAGCAAAACACCAGCAGCAGTTTTTCC
AGTTCGTTTATCCGGGCAAACCATCGAAGTGACCAGCGAATACCTGTTCCGTCATAGCGATAACGAGCTCCTGCACTG
GATGGTGGCGCTGGATGGTAAGCCGCTGGCAAGCGGTGAAGTGCCTCTGGATGTCGCTCCACAAGGTAAACAGTTGAT
TGAACCTCTGAACTACCGCAGCCGAGAGCGCCGGGCAACTCTGGCTCACAGTACGCGTAGTGCAACCGAACCGCAG
CGCATGGTCAGAAAGCCGGCACATCAGCGCTGGCAGCAGTGGCGTCTGGCGGAAAAACCTCAGTGTGACGCTCCCCG
CGCGTCCACGCCATCCCGCATCTGACCACCAGCGAAATGGATTTTTGTCATCGAGCTGGGTAATAAGCGTTGGCAATTT
AACC GCCAGTCAGGCTTTCTTTACAGATGTGGATTGGCGATAAAAAACA ACTGCTGACGCCGCTGCGCGATCAGTTCA
CCCGTGACCCGCTGGATAACGACATTGGCGTAAGTGAAGCGACCCGCATTGACCCTAACGCCTGGGTGCAACGCTGGA
AGGCGGGCGGCCATTACCAGGCCGAAGCAGCGTTGTTGCAGTGCACGGCAGATACACTTGCTGATGCGGTGCTGATTA
CGACCGCTCACGCGTGGCAGCATCAGGGGAAAACCTTATTTATCAGCCGAAAAACCTACCGGATTGATGGTAGTGGTC
AAATGGCGATTACCGTTGATGTTGAAGTGGCGAGCGATACCCGCATCCGGCGCGGATTGGCCTGAACTGCCAGCTGG
CGCAGGTAGCAGAGCGGGTAACTGGCTCGGATTAGGGCCGCAAGAAAACTATCCCGACCGCCTTACTGCCGCTGTT
TTGACCGCTGGGATCTGCCATTGTCAGACATGTATACCCCGTACGTCTTCCCGAGCGAAAAACGGTCTGCGCTGCGGGAC
GCGCGAATTGAATTATGGCCACACCACTGGCGCGGCGACTTCCAGTTCAACATCAGCCGCTACAGTCAACAGCAACT
GATGGAACACAGCCATCGCCATCTGCTGCACGCGGAAGAAGGCACATGGCTGAATATCGACGGTTTCCATATGGGGAT
TGGTGGCGACGACTCCTGGAGCCCGTCAGTATCGGCGGAATTCAGCTGAGCGCCGGTCGCTACCATTACCAGTTGGTC
TGGTGTCAAAAATAATAATAACCGGGCAGGCCATGTCTGCCCGTATTTCCGCTAAGGAAATCCATTATGTACTATTTAA
AAAACACAAACTTTTTGGATGTTTCGTTTATTCTTTTTCTTTTACTTTTTATCATGGGAGCCTACTTCCCGTTTTTCCCGA
TTTGGCTACATGACATCAACCATATCAGCAAAAGTGATACGGGTATTATTTTGGCGCTATTTCTCTGTTCTCGCTATTA
TTCCAACCGCTGTTTGGTCTGCTTTCTGACAAACTCGGAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAAT
AGCATCACAAATTTACAAATTTAATTAAGGCCGCGGGATCGATCCCGTCGAGCAGTGTGGTTTTCAAGAGGAAGCAA
AAAGCCTCTCCACCCAGGCCTGGAATGTTTCCACCCAATGTCGAGCAGTGTGGTTTTGCAAGAGGAAGCAAAAAGCCT
CTCCACCCAGGCCTGGAATGTTTCCACCCAATGTCGAGCAAACCCCGCCCGAGCGTCTTGTCAATTGGCGAATTCGAACAC
GCAGATGCAGTCGGGGCGGCGCGGTCCCAGGTCCACTTCGCATATTAAGGTGACGCGTGTGGCCTCGAACACCGAGCG
ACCCTGCAGCCAATATGGGATCGGCCATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGC
TATTCGGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCC
GGTCTTTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCC
ACGACGGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTG
CCGGGGCAGGATCTCCTGTCTATCTACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGC
ATACGCTTGATCCGGCTACCTGCCATTGACCACCAAGCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAG
CCGTCTTGTGATCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAAGTGTTCGCCAGGCTCAAGG
CGCGCATGCCCCAGCGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAATGGCC
GCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATAT
TGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCTCGTGCTTTACGGTATCGCCGCTCCCGATTTCGACGCGCATC
GCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGGGGATCGGCAATAAAAAGACAGAATAAAACGCACGGGTGTTGGGT
CGTTTGTTCGGATCCGAATTCCTCGAGGGCGCGCCATTTAAATGGCCAGCGAGGCCGGTACCCAATTCGCCCTATAGGC
TGGTTATTGAGTCTCCATGCCAAAGTGTTCTCTCTACTGCCAGTGGGCACAATGCCCATAGGTGTGCCAGGACAGGC
ACTGTCAGAAATGCTACCTCCAGGAGCTGGAACGTTGCTTGACTGCCTGCCATAACGGTGGGGTGAGTAGCCTAAGGG
GTCAGGGTGACCTTGGAGGTCTTGCTACCTGGTGACTTTTCTATCCTCATCTTAGGTTTGCAATAGCAATCGTAACTGT
CACTGTGCTGCTGGCTGGGCTCCACCCTTCTGTGACAAGCCTGGCTTGGGTGGTAGCGTGAGTGGCCCTGCACAGT
CTGCAAGTATGCCAGTGGGGTGGGGGCAGGCAGGAACACCTGGGCAGTAGCCTGCTTGAGACTCAGCACCCCTGCC
TCCACAGACCGAGATGCCTTCCCCTTGCCATGCTCCTCAGCTTCTGCTGCCTCTGCTCCCTGGGGCTGGCCTAGCCTG
GTGCTACTACCAGCTCCCAACATTCTGTCATCGAAGGGGACTGTGCTGCAGGAGGGACCCCTATGGAATAGGTAGGTT
CGGTGCTCAGGTCTCTCTTCTGAGCCTGCCCCCATGGCTCCTGCTTCTCAGAACTCTTCAGGGCTTTGTAGAGTGAGAG
GCTACAGGGAGCTGGGGCTTTAGGAAGCTAGATGGGATCCTTATTCTCTAGATGTAGTGAGAGCTCCAGGCTGTGGG
AAGAAGTCCGTGGTGTGTATCACTGCCCTGACCAGCACTTGGTGGTGTGGTCCTTTCCATGGGCTTCCCTTGATTTTTT
GTTTTATGTTTTTTGTTGTTGTTGTTTTTTCTGCTTTAAAGAAATTCAACACAGCCTGTGCTCCGCTTTGTCTGAAGA
CGACTCTAGCTTCTTGTCTCAATATCAGCCATCTCCCATGGCCTTTGCCCTAATTACTCCCTTCAGGTCCCTCGGTGCTA
GCCAAGGACCCCTTTGTGCTCCCTATAAACTGGCCAGCTATAGTGTTGCTCTTTCTGTGCCAGGACTCTGTGCCTCTGTC
CCCTGTAGATCACAGTGCTGTAAACCCAATTTTCTGGCAGGCAGAAATGCCACCTGATAGCACACATTATCTACCGAGG
GCAGCCTCCTCACTAGGCCCTCGGGCAAGTCAGGCACATTATGTCCCTGTCTGAACTTGGAAGTGTCTAGACCAATT
GAGGGAAGGGCAGGGTTGGGTGGAGATGTGACTAGAGGGCACCTCAGGCCAGAAACAGCACCCAGCAGGCCCCAGGA
GCCAGTGAGACGGTCTGGGGAAAGCCAGGTAGTGCCTGGGGGGTGGGGGCGGTGCTGTCAGACAGGGAAACAGGTGG

[illegible]

TATCTTACTCTTCCAGAGGACCAGTGTTCAATTCCCAGCAAACATATCAGGTGCCACACCATCACTTGTAGCTCCAGCT
GCAGATCTGCTACATCTGGCCTCCATAGGCACCCACACACAGGTGGCACCCACAATTAATAAGATAAATCTAA
AACAGCAAAGTTAAAGCATGAGCTGAAACTAGTAAAGTGCTTGTGTGGCATAGACCAAGACCTGGGTTTGGTCCCTAC
CTGTTAGAAATAGTCTCAGTATCACACAAAGGAACACCCAAGCGAAGCAAAAGCTCCCAGCAAGACAAAACCTACAGTC
TTCATTGAGAGTGTGCACGCTGAAGACCGAGCACACTGGGTGCAAAATGTACTTGGATTCTGTTTGCTTGTTTTGTTCCA
GACAGGGTTTCTCTGCATAACAGCCTTGGCTGTCCCTGAAATTCAGTGTGTAGACCAGGCTGGCCTCAAACCCTCAGAG
ATCCGTTCACCCACGCTTATCTAGGCTTCAGTCTCACCCCTGTGAGATGGCCTGAAAGTTGTTAGAACCGCGCGGGATCT
ATTTCTGACAGACTGGCTGGCATCTTTTCCTTCTCTCAGCATGAGATTCCTGGGGCGTTCCTTTCAGCATCAAGCATG
GTAGCAGAGTTGGAACCTGAGGGCTGAGGGCTCAGACTCAGACCATAAACTGGAAGCAGAGAGAACTGGAGATTGTG
GGAGGCTTTGAAACCTCAGCTCCTGCCCCAGCAAATACCTTCCAGCAAGGCCACACCTCTTAAACCTCCCCAACAGGG
TCACCAACTGGGGACCTAATATTCAAATGCCCACAAATATGGGAGACATGACATCCAAACCGCCAGGACAGGTGTATA
CCTCCATGCTTGGTTTCCGTAGTAAGAAACACTAAACATTAGCCTTTCCTAATAAAACACTGATATAAAGCCCTGCTATT
TCGATGTTTTTCTCTGTCTGCTCCTTCTCCACCTGCTTCTCTGTTCTCTGACCTCTTCTGTGTACAGATAGCCCTG
CCATGTCCATCTGCCAGCCATGTTCTGTCTACTTGCCTCTCTCTCTGCTCTGGACTCTTCTAGATGCCTCTGGCTGTTCTT
TCTCATATCTACAATAAAAAACCTGGCCCTTAATCATACCACAGAGATATCGAGTCTTCTTTATACAAATTTTCTTGTAGC
TCTCTTAAAGGGAGATTAAATAAACAGGCTGAGCACACAGGAGGATCATGGCATATTGACTTGCTTGTGAGGT