



Lexicon Genetics Incorporated – Genentech Project Materials

Genentech ID:	UNQ6119	Date of Submission:	2/8/06
Lexicon Contract Name:	DNA497	Mutation Type:	x Standard Knock out
LexVision Name:	SEC614N1		☐ Conditional
Reference accessions:	NM_153077, ENSMUST00000058056	Is this gene X-linked?	

Required Materials:

- x pKOS clone DNA(s) __pKOS-42____
- x Target Vector DNA __pKOS42-TVneo____
- x Targeted ES Cell DNA __2F8____
- x Genomic Map

Southern Blot Analysis: *External/Internal Probe Strategies*

	<u>5' External</u>	<u>3' External</u>
Name of Probe:	9 + 10	13 + 14
Restriction Enzyme for Genomic Digest:	BamHI	NdeI
Predicted Wild-type Band (kb):	13.1	9.2
Predicted Mutant Band (kb):	5.6	7.6
Probe Size:	330 bp	291 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:	DNA497-3	5' Primer Name:	Neo3a
3' Primer Name:	DNA497-4	3' Primer Name:	DNA497-8
Predicted Wild-type Band (bp):	329	Predicted Wild-type Band (bp):	none
Predicted mutant band (bp)	none	Predicted mutant band (bp)	329

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**

DNA497-9 5' – GCATGCAAAGTCAACTGGAG
DNA497-10 5' – TCTGTCTGAGACCTGAAGAG
DNA497-13 5' – CTATCATACCCTGGAAGAC
DNA497-14 5' – CAATCTCACACTAGCTTCC

PCR Genotyping

DNA497-3 5' – TCTGTATCCTTCCTAACCGAGGC
DNA497-4 5' – CTTAGTGCCTCAGAGGCTTGGC
DNA497-8 5' – CTCATGAGGCCTCAGATGATTCC
Neo3a 5' – GCAGCGCATCGCCTTCTATC

ATGTGCTCCCTTCCCATGGCAAGATACACATGTAAGTAATCTTAAACGATCGCTCAATCAAGGGGCGCTGGAGATCACATGAGAAGGGAAAAGGCTGAG
TCAAAGGGACAAAGCTCCCTCTAGCCACAGAAATCTCAAACACTGAATAATTGATCTTTCATCTTTGTGCAATCACAAACAGCCCTCTTTCTGTTGACAGA
TGGAACAACTCTAAGAGTGGTATTGCTTATTTACAGACCGGAACTCAACCTCCAGCGGTTATACAATTTTCTCATGTCATGCAATTAC
CCAAAAGCAGAGAGTGGGATCGGACTCTCTGTTCTCTAAACTGATGTAGCTAGTTCTTAGAAAGCTCAAACAATCTTGAGTCCCAAGGACAGCACCTTT
ATGGTCACCTGGATTGATACCTATATCAAAAAAAAAAAAAAGGTCTCACTAGATAGCCCTGGCTACCCTGAAACTCTCACTGTGTACATTTAGGTGACCA
CGAAGTACACAGATCTGCCTTCCAAGTGCTGGGATTAAAGTATGTACCCACCACACCTGCATCTTTTGACAATAAAGTCTGAGTGTATCTAAATTTCTCCAG
TGCTTAAACAGTAACTCCGAGTCCCAAGCTGAGAAAAAGTCCGAGGTGGTGAATCTGTACAGACCTTTTGCTTTAATGTGACAAAGTGAACCTGCTT
TAAAAACAATACGCAAGCTGTTTTTGCTAATTGCTAAGTGTTCGACAGACAGAAAAAGGCTCCGAGAAGTGGTAACCTTTGGTCCAGAGGTTCTGTTCTCAA
ACTCATTGTGAGCTCTGAAAGCAACTGATGGGCAGCTCTGAAATCAGCTGGGCAATTAGGCTAATAACAGGCATAAATTTAATGTTTCACACGCATGAC
AGTTGCTCCCCAGCTGCCCTAGTACATACCTACCTCCTAGGCACGTCATTAGACCCATAAGGTATAACCAAGTACTAATCAGGCCCTGGTCTAATTTCTA
AGTTGGCCTCCTATATAAGTGCCCACTCAGAGTGTACCTCATCATGCTGTAGTGGGCCAGAGCTAGGGACATAGACTTTTCTATTGTGCTCAATTTCTGA
TTTGTAATTTTCTACAAAAAGAAATTTTTTTAATTTTACAAATCAATCACAGTTACTACATCTTCAGTTCCTTCTAATTAATGATTGTTACTATTAAAAA
AATAAAATAAATCAAGCTCAGAAACATCATGGATAGGGTTCATTGTATCTCCAGGGTACCTGAGCTTCAAAGCAACTCCTCAGACAGCCATGAAAACA
TCCTCAATTACCTCATGAGAAGACACTATTGTCAATTTCTGGAGCCTCTGATAATCCTGAGCCTAGGCAGCTTTGGGATGAAACAATTTCTACCCTTATTG
GAACAGTGTCCCTCTCCTGTCTGGAACAATTCACAAAGGCTCCATGTGGTTGTCCAGTAAGTGGTATGGGGACAGAAATGGACAATGATCCCTGA
GGCAGTGATCCATTAACCTTGCCTCCTATTTCAGAATCAAGGATGCACATCAAAAGGCTTTGTACACAGGAATGGCCAGCTCCTGCTGGGAGACC
CTGATTCAGACAATTATAGTCCAGGTGATCTTCCGGTGGTGGGGGTGGGGAGTGGAGGGGAGGGTGTGGGGGGGGCTCTCTCCAGAAGTTGCTTAG
TGTCCATCTGCCACAAGGCCTTGATTCTTTCCTTCAATTGTGTCTCTAGAGACATGAGAATATTGTCACAGTGATAAGGAGAAGAGGTAGGGGCAGTTT
CTTCCTGTAAAAAATGAATTCATTTACCCTGCAGTCTCCATACAGAAACAGGCCAGGGGGGACAGCCAGTAACTTCTAGCTGAGCCCTACCTTGC
TTAAAACTGCCATGTGGTCCCTCTCACTGTCTGAATTCATTCTGTCTTACCTCCCGAGAGAAGGTCTGTATCTTCTTCAACCGAGCCCTAGACCGCTC
CAAGTCCCCATCTTCTGGGATGACAGGAGGAAGTTGCTGCCTGGCGTGTGTAAGACAAGAGAGGGACCTCTCTGCAGCTGGAGGTGAGACACC
CCTCCTCATTGCAGTCAGTACTGCCACTGGAACATAGTGACATCTTTGAACCCACATGTCCCTCTCTTGTGTTCCCATCTATCTCTCTTTGCCTCCAGCTG
AGGGACTCTAGCCTTTGGGGATGTACAGAAAGAACATGGCTTCGGAAGAACTCTCCCTATTGAGTCCTTCTTTGGCCAAGCCTCTGAGGCACTAAGGGC
TGACGTCCCAACCAACACTATTTCATCTACAGAGTGTCTCCCTTTCCCCACAGGATGTGAACATCGAGGACCTATACAGAGGGAGGTGAACAAACCA
CCGTTTACCTTTTCCAGAGAAGCTTGGGATCTGCCTTCCAGCTTGAGGCTGTGCCTCCCTGGCTGTTTCTCTGTGGCCAGCTGAGCCCCAGCA
GCCAGTGCAGCTCACCAAAGAGAGTGAACCCTCCACCCATACTGAATTCTACTTTGAGATGAGTCGGTAAAGAGACATA

[illegible]

[illegible]

[illegible]

GGCCGCTCTAGAGGCCATAGCGGCCGGATCCTCGAGGCGCGCCGGATCCCGGGCCGCTCTAGCTAGACTAGTCTAGCTAGAGAATTCGCCCCCTCTCC
 CTCCCCCCCCCTAACGTTACTGGCCGAAGCCGCTTGAATAAAGCCCGGTGTGCGTTTGTCTATATGTTATTTCCACCATATTGCCGCTCTTTGGCAAT
 GTGAGGGCCCGGAAACGCTGGCCCTTCTCTTTCGACGACATTCCTAGGGGTCTTTCCCTCTCGCCAAAGGAATGCAAGGTCTGTTGAATGTCGTGAAG
 GAAGCAGTTCTCTGTAAGCTTCTTGAAGACAAACAGCTCTGTAGCCACCTTTTGCAGGCAGCGGAACCCCAACCTGGCGACAGTGGCTCTGCGG
 CCAAAGCCACGTGTATAAGATACACCTGCAAAAGGCGGCACAAACCCAGTGCCACGTTGTGAGTTGGATAGTTGTGAAAGAGACAAATGGCTCTCCT
 CAAGCGTATTCACAAAGGGGCTGAAGGATGCCAGAAGGTACCCATTGTATGGATCTGATCTGGGGCCTCGGTGCACATGCTTTACATGTGTTAGT
 CGAGTTTAAAAAACGCTTAGGCCCCCCGAACACGGGACGTGGTTTTCCTTTGAAAAACACGATGATAAGCTTGCACAAACCATGGAAGATCCCGT
 CGTTTTACAAACGTCGTACTGGGAAACCCCTGCGCTTACCCAACTTAATCGCTTGCACACATCCCTTTCCGCAAGCTGGCGTAATAGCGAAGAGGC
 CCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCTGAATGGCGAATGGCGCTTTTGCTGCTGTTTCCGGCACCAGAAGCGGTGCCGGAAGAGCTGGGTGG
 AGTGGCATCTTCTGAGGCCGATACTGTCGTCGTCCCTCAAACCTGGCAGATGCACGGTTACGATGCGCCCATCTACACCAACGTAACCTATCCATTA
 CGGTCAATCCGCGCTTGTGTCCACGGGAGATCCGACGGGTGTTACTCGCTCACATTTAATGTTGATGAAAGCTGGCTACAGGAAGGCCACGCGA
 ATATATTTTGGCGCTTAATCGGCGTTTACTCTGTGGTGCAACGGGCGCTGGGTGGTTACGGCCAGGACAGTCGTTCCGCTGCTGAATTTGACCTGA
 GCGCATTTTACGCGCCGGAGAAAAACCGCTCGCGGTGATGTTGCTGCGCTGGAGTGACGCGATTATCTGGAAGATCAGGATATGTGGCGGATGAGC
 GGCATTTTCCGTGACGTCTCGTTGCTGCATAAACCGACTACACAAATCAGCGATTTCCATGTTGCCACTCGCTTTAATGATGATTTACGCCGCGCTGTAC
 TGGAGGCTGAAGTTCAGATGTGCGCGGAGTTGCGTGACTACCTACGGGTAACAGTTTCTTTATGGCAGGGTGAAACGCAGAGTCCGCCAGCGGCACCGCG
 CCTTTCCGCGGAGTAAATTCGATGAGCGTGGTGGTTATGCCGATCGCGTACACTACGCTGAACGCTCGAAACCCGAAACTGTGGAGCGCCGAAAT
 CCGGAATCTCTATCGTGGGTGGTTGAAGTGCACACCGCCGACGGCACGCTGATTGAAGCAGAAGCCTGCGATGTCGTTTCCGCGAGGTGCGGATTG
 AAAATGGTCTGCTGCTGCTGAACGGCAAGCCGTTGCTGATTGAGGCGGTTAACCGTCAACGAGCATCATCTCTGCATGGTCAGGTGATGGATGAGCAG
 ACGATGGTGCAGGATATCTGTCTGATGAAGCAGAACAACTTAACGCCGTGCGCTGTTGCGATTATCCGAACCATCCGCTGTGGTACACGCTGTGCGAC
 CGCTACGGCCTGTATGTGGTGGATGAAGCCAATATTGAAACCCACGGCATGGTGCCAATGAATCGTCTGACCGATGATCCGCGCTGGCTACCGCGCGAT
 GAGCGAACGCGTAACGCGAATGGTGACGCGATCGTAATCACCCGAGTGTGATCATCTGGTCGTTGGGAATGAATCAGGCCACGGCGCTAATCAC
 GACGCGCTGTATCGCTGGATCAAACTCTGTCGATCCTTCCCGCCGGTGACGTATGAAGGCGGCGAGCCGACACCACGGCCACCGATATTATTGGCC
 GATGTACGCGCGCGTGGATGAAGACCAGCCCTTCCCGGCTGTGCCGAAATGGTCCATCAAAAAATGGCTTTCGCTACCTGGAGAGACGCGCCCGCTGA
 TCCTTTGCGAATACGCCCACGCGATGGGTAACAGTCTTGGCGGTTTCGCTAAATACTGGCAGGCGTTTCGTCAGTATCCCGGTTTACAGGCGCGCTTCG
 TCTGGGACTGGGTGGATCAGTCGCTGATTAATAATGATGAAACGGCAACCCGTGGTCGGCTTACGGCGGTGATTTTGGCGATACGCGGAACGATCGC
 CAGTTCTGTATGAACGGTCTGGTCTTTTGGCAGCCGACGCGCATCTACAGCGCTGACGGAAGCAAAACACCAGCAGCAGTTCCTCAGTTCCGTTTATCC
 GGGCAAACCATCGAAGTGACCAGCGAATACCTGTTCCGTCATAGCGATAACGAGCTCCTGCACTGGATGGTGGCGCTGGATGGTAAGCCGCTGGCAAG
 CGGTGAAGTGCCTCTGGATGTCGCTCCACAAGGTAACAGCTTGATTGAACCTGCCTGAACACCGCAGCCGGAGACGCGCCGGCAACTCTGGCTACACAG
 TACGCGTAGTGCAACCGAACCGCACCCGATGGTCAGAAGCCGGACATCAGCGCTGGCAGTGGCGGTGCGGAAACCTCAGTGTGACGCT
 CCCCAGCGCGTCCACGCCATCCCGCATCTGACCAACAGCGAAATGGATTTTTCATCGAGCTGGGTAAATAAGCGTTGGCAATTTAACCGCGCAGTCAGG

[illegible]

GCATTTTATCTCCCCAGGGCAACACATGGAAATGAAAGATTGTGAAAAGTAATTTAAAGAAAAAGAAAAAAATTTAACAAGGAATAAGAATCTTG
TTTCTGAAAAATGCTTAAGAGTGTGGAAAAACATAAAGCTGGATTCTAATAGAATGCAATTGGATTGTAATGAAAACCTATCAAAGTTATGAAATAGCTT
TCACTACCTTGCAAAAAATCTCTTGGCATGTGTGTTGTTGGCAAAATTTCTTGTTAGTTTAAACCACAAACAATAACAACAAATAGCAAAATTTGGGT
CTCAGCCTCATTCATTTTTTCTCATTTCTTGCTCTGTGATCGTCTGGGTCTTAAGCTGACACCTCACC AATTCCTCATCAAGACCTTTGTGGAATTTGCA
AATGTCCCAAAAAGGAGAATTACAATAAGTCAGAGAACGTTCTGTCCAATTCTTTATCCCTAGTGATGGATGAGTAAAGGATGTATAAGAGATGGATA
AATGGACTGATGTACAGATAAATGAAGGAATATGTACATGGTTAGGTGGATAGATGACTTACTCAACAGATGAGTAGAAGGATGAGAAATAGATGGA
CAGCTGGACTGAGGCATGCAAAAGTCAACTGGAGAACTGAGTCTCTTGACCATGCACTGTCCAGGGTCTCATATTTCCCTAGAGTCCAGGGCCCATGGCT
CCTGTGCCATCCCCATGCAAATCTAAGGTTAATACGTTCTACAGCTGAGTTTCTTACATATGTGTCTCAGTAAGTTTGTATCAACTAATTAATCTGAA
AGGAGTTCCCTTCTGATCTTCCCAACAGAGCCACACTCGTGATGAAGTCAGCCCTGCTTCATTGTGGTTCTCTGGATGCATCTGGCTTCCATCAGCATAA
TCTTTCTATTTCTTGATCCTTCCAACCTCTTCAGGTCTCAGACAGAACCCCATGGAGCATCAAAGAGGTTTGACCCCAAGCATTGTTTATGTAGCTGCAAAA
CCACTAATAACACAGTCAATGACAGTAGCTACAGAGACAGCAGGTGAGTGTCTGGCTCTGTCAAGGCTTTATGAGTGACTCTCTCCCTTCCCGCAAA
TACTCATTAATCTCCCCACCTCCTTATTTATTTGGACTGTGTTGAAGATATTATGAAATCTCTGGGCTCTTCTTCCCGGATCTAGAGCCAATTACAGATTCT
GTAGGTTTGACCCACCTGACCAGACATTATAAACACAGTGTCTGGTGCCCTGAAGAAAACAGTTGGAGACTCCAGGCATTAGAATCCAGGCACCAGGA
ACTACAGGTGAGTGGTGACAGTCCGGTCTCTGTGTATCTCTTACACACACACATACACACACACACAACACAACATACACACACATCAACACACAA
CACATACACATACACACATACACACACACACACTTTTCTGTAATGTCTCAAAATTCAGGCTCTAGGGAAGAAGATGCTTTTTAGAGAAATGCG
GTGTGATGTTCTATAAGTCTAGGAATCTTGATAGAAATTAATGAGAAAGTATAGTAATAGGTCAAAGCAAGGGTACTACATATTTGGAACACACAGATT
TGAAAGTCATCTCAAAAGAAATTTATAGGCCAGAGATGTTCAAAAAATGTTTGTGTTGTGACATATGGAAGCTCCCATGGAGACATTCTGTGATTCTC
ATCAATAGACAGTAGGGATGCCACCAAGGTGCTAACGTCTTCATCACCCCATCATCTATCATACATCCAAATGGTTTCTTTGAAAACAAATCTCCTTGTG
AAACTTAAAGTAGCCTTGAAAATATAAATCTTGTCAGCCTCTCATTTCAATGGGAATAGATTGAAGGCTTAAGGACCAAAAAACAAAAACAAAA
AACAAAATAAAAACACCAAAAAAACCCATAAATGAATGAGTAGTCTAAGTTATTTTGAATCCAGCCTTTCAGTCAAAAGCTTGATTCTAGCCATA
TCTGTGTTCTGATCTTAAGGTGCTGTGTCTGTGAGTTGTATAGTTGGATAGAGGTACAGATGAGCTATATACATCATGCTTCAAGATTTCAGGATCTTAT
AATTTTATAAAGCAAATAATTTGTCTTAATGCACACTAATAAACAAATATAGCAAAGTTTGACAGGAGTTGACAGTACTGTTAGAGAAGTGAAGGGAA
GAATTTTGTATGATAGTAAGGGGGAATAATCAAATTTTGAAGTCTGGAATCATACATAGTTTGACATAGAAAGAACCTTGGCAACCAACATAATCTAAT
GCATAGGCCCAAGAACTGGCTGTGTTTTAAGATCTCATCTGCTCAGCTGTTATGTAACTGAACAGCAAGATACTAAGCCCAAGTATAGTGAAGCATG
TCCAGTGATCTTAATAGGAGTGACAGGAATGGTTGGTGATGAAGAGGGGTGGATTTTGAGCAGGAATACCAAAAGCAATGCTGACTGTGCCCTTGGAG
AGAATTAGCATGAGTCTTGAGAGAAAAATGAGATGCTATTGCACAAGCAACCTAGGGCCAGATGGTGCAAGATAGGTGGCCATCGTGGACTTTAGA
ACCAGGCAGGAATGTGATCAGAGATGACTTTATAGTGGTTAGGTTTATGAGAAACCCAGGAGGGTTAGCATGTTTACAATGGTGACTAAAAACAAG
CACAAGGTTATACTTTAAAGAAATAATCTGAAAAGAAAGGAGGTATATTTTCAGTCCGGAAGAGGAATATTACAAGCTGAGAGGAGTAGATT
GAGAAAGAGAAGTGGATTGTGGAGGAGCAGATGCTCACCACGCCCTTACACTCACTTGAAGTACACCCAAAGATGAAGGTGTGCTGTGGACTGTCTGA
AGCTCAGCCTGTGGCTGGGAAGCAGTAAACAAAATGCTCATCAGCTGTACAAGATATTCATAGCATATAAAAAATAAAAGTGCTTAGGCTATTCT
CTTACAACCTCTCAGCCTTATGAATGACCGGAAGGAAAAGAACTCTACAATGTGCCTGTGTCTGTTCTTACTTCTCTGCCACAAGCAAAAGAGCCTTG
GAATTTGGCTCAGAGGGAACGTCATCAACAGGCTGGCCTTGAGGCTGGGCTGTATTCTGCTCAGCTGGGATAGGGAATTCGCTATTTCTTTATAATCC
AAGTGTGCCTGGGACCAACGACGATATTAAAGACTGCTGGTGTGATGTTTGAAGTGTGAGTTCAGATTTTCATCCGACCTTAAAGAGTAACACTGT
ATGAGGATACAAGATTAAGAAATATGCATTAGAGAGTAATTGGCTAAATGGGTAAATGTGATGCAAGCAGGAGGATCTGATTGACTCCCCAGGACCCA
CACAGTTCCTCGCTAGAGCAGATCTGTAATCACAGTAGGCGTATGATGAAATGGGAGGTGAATCAAGAGAATCTCTAGCAGCTACGGGCTGGCCA
GCCTCCCATGCACAGCACTAAATAAGGCAAGGACCAATACCTGAAGTTGTCCCATTACCTTCACATATACACCACGGCATGTGTGACTTGTACTACA
CATACAAACAAATACACACAGTGCACACATACAAAACCTCAGAGATTAAAGGAATGTTGCCCTGACATATCAGTTCTCTAAGCTTCTGCTTAC
ACTACAAGCAGTATTAATAAAGGATAGGCGAGAGAACAGTTACCGAATGGTTCAGAAGTGGGGCCATGCCCTGTGACTTTAAACAAATGTTTCATATTT
TTAAATAATAACACTTAGATTACAAAAATAAATTTACTACAGGAAAAATGTTAAGAACTATCAACAACCATGACTATCCTGTGCGCCACAAATGAGTGT
ATAACAAGCACCAGGCTCCTTGTCCACATGTGTGTGTCTACACAGTATGAATTTAATTTGGGATAATAATGTGCACATTTCTTACGGCTGCAAGTT
TTACTTCATGTATTTGAATGTTTGTGCCACAAATGCTCATTTAAGGAGCATATCCTTATTTCTGGATTATCATCTCCCTTACGGCCAGCTGGACATTG
ACAGCATTTTCCAACTTTCAACCTTGTAAAAATAACTAATTGAACTATTTTATAACTAAGCATTTTGGGCAATCAATTACCTCTGCCTGGAATGGGGCA
ACAACACATGCAATCATGGGAAAGCCAGGATGTGCTGTCTGATCCCTAGCCCTGGCATTGCTGCAGAACCTCACTCTCATCTGTGCCCTGATATCCTT
CACTCTCAAGTCTTTTCCAGTGACTTTTAAAGGCAACAGAATCATATAGCCAATAATGAAAGCTACTTGGTCTACAGTTGTGTGGCGTTTTTATAGAT
ATTTTCTTCAATTTACATTTCAAATGCTATCCCAAAGTCCCTTACCTGCTGCTCCCTACCCACTCACTCCCATCTTGGCCCTGGCTT
CCCCCTTACTGGGGCATATAAAGTTTGCTAGACCAAGGGGCCCTCTCTTCCCAATGATGGCCAATCAAGGCCATTTTCTGCTACATATGTCAGTACAGACA
CCAGTTCTGGGGTACTGTTAGTTCATATTGTTGTTCTACCTATGGGGTGCAGACCCCTTCAGCTCTTGAGTACTTTCTCTAGCTCCTCCATTGGGAGC
CCTGTGTTCCATCCTATAGATGACTGTGAGCATCCACTTCTGTATTTGCCAGGCATGGCATATGAAATAGTATCTGCATTGTTGGTGGCTGATTATGGGAT
GGACCCCGGGTGGGGCAGTCTCTGGATGGTCCATCTTTTATCTAGTCCCAACTTTGTCTGCAACTTCTTCCATGGATTTTATGCTCCCTAATCT
AGGGAGAAATGAAGTATCCACAGTGTGATCTTCTCTTGTATTTTCTATGTTTGAAGTTGTATCTTGGATATTTAGGTTTCTGGGCTAATATCCAC
TTATCAGTGAGTACATATCAAGTGAATTTTGTGATTAGGTTACCTCACTCAAGATGATATTCTCCACTATGTTTCATAGCAGCCCTATTTATAGTAGC
CAGAAGCTGGAAGAACCAGTCCCTCAACAGAGGAATGGATACAGAAAAATGTGGCACATTATGCAATGGAAGTACCCTCAGATATTAACAAAC
GAATTTATGAAATTTCTGGGCAAAACCCATCTAAAGACCAGGAATAAGGAATGGAGTGCCTGCCTGCAGCTGGGAGAGCTGGGAGACCTTTG
TGGATTCTGTAATCTTAGGGTACGGAAACAGCTGTGCTGGCTGAATAATTCTGAGCTCCAGCATGTCTGCCCTCCCAAAAAACATCTGTTTTCTGAAAG
CCTTTTTCTTCTTTGCTCAGTGAAGACCAGACACTCCCAACTGCAGGAGGCCGCTCTAGAGGCCATAGCGGCCGATCCTCGAGGGCGCGCCGGATCCC
GGGCGCTCTAGCTAGACTAGTCTAGCTAGAGAATTCCGCCCTCTCCTTCCCCCCCCCTAACGTTACTGGCCGAAGCCGCTTGAATAAGGCCGGTG
TGCGTTTGTCTATGTTATTTTCCACCATATTGCCGTCTTTTGGCAATGTGAGGGCCCGGAAACCTGGCCCTGTCTTCTTGACGAGCATTCCTAGGGGT
CTTTCCCTCTCGCCAAAGGAATGCAAGGTCTGTGATGCTGAAGGAACAGTCTCTGGAAGCTTCTTGAAGACAAACAGTCTGTAGCGACC
CTTTGACGGCAGCGGAACCCCCACCTGGCGACAGGTGCCTCTGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGGCGCACAAACCCAGTG
CCACGTTGTGAGTTGGATAGTTGTGGAAGAGTCAAATGGCTCTCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCAGAAGGTACCCCATTTGTA
TGGGATCTGATCTGGGGCCTCGGTGCACATGCTTACATGTGTTAGTCGAGGTTAAAAAACAGTCTAGGCCCCCGAACCACGGGGACGTGGTTTTCC
TTTGAAAAACAGATGATAAGCTTGCCACAACCATGGAAGATCCCGTCTTTTACAACGCTGCTGAGGAAAAACCTGGCGTTACCAACTAATCTGAC
CTTGACGACATCCCCCTTTCGGCAGTGGCGTAATAGCGAAGAGGCCGACCGGATCGCCCTTCCCAACAGTTGCGCAGCTGGAATGGCAATGGCG
CTTTGCTGTTTTCGGCACCAAGCGGTGCCGGAAGCTGGCTGGAGTGCGATCTTCTGAGGCCGATACTGTCTGCTGCTCCCTCAAACCTGGCAGAT
GCACGTTACGATGCGCCATCTACACCAACGTAACCTATCCATTACGGTCAATCGGCCGTTGTGCCACGGAGAATCCGACGGGTTGTTACTCGCT
CACATTTAATGTTGATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATATTTTATGCGGTTAACTCGGCTTCACTCTGTGGTGCAACGGGCGCTG
GGTCCGTTACGGCCAGGACAGTCTGTTGCCGTCTGAATTTGACCTGAGCGCATTTTATCGCGCCGAGAAAAACCCCTCGCGGTGAATGGTGCTGCGCTG
GAGTGACGGCAGTTATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATTTTCCGTGACGCTCTGTTGCTGCATAAACCGACTACACAAATCAGCG
ATTTCCATGTTGCCACTCGCTTAAATGATGATTTACGCCGCGCTGTACTGAGGCTGAAGTTGAGATGTGCGGCGAGTTGCGTACTACCTACGGGTAA
CAGTTCTTTATGCGCAGGTTGAACCGCAGGTCGCCAGCGCACCGCGCTTTCCGGCGGTGAAATATCGATGAGCGGTGGTGTATGCGGATCGCGTCA
CACTACTCTGAAACGTGAGAAACCCGAAACCTGTGGAGGCGCGAAATCCCGAATCTCTATGTCGGGTGGTTGAACCTGCACACCGCGCAGCGCAGCTG
ATTGAAGCAGAAGCCTGCGATGTGCGTTTCCGCGAGGTGCGGATTGAAATGGTCTGCTGCTGCTGAACGGCAAGCCGTTGCTGATTGAGGCGTTAA
CCGTACGAGCATCATCTCTGCATGGTCAGGTCTAGGATGAGCAGACGATGGTGCAGGATATCCTGCTGATGAAGCAGAACAACTTAAACGCCGTGC
GCTGTTGCAATTATCCGAACCATCCGCTGTGGTACAGCTGTGCGACCGCTACGGCCTGTATGTGGTGGATGAAGCCAATATTGAAACCCACGGCATGG

[illegible]

[illegible]