



## Lexicon Genetics Incorporated – Genentech Project Materials

|                               |           |                               |                                      |
|-------------------------------|-----------|-------------------------------|--------------------------------------|
| <b>Genentech ID:</b>          | UNQ1942   | <b>Date of Submission:</b>    | 1/17/05                              |
| <b>Lexicon Contract Name:</b> | DNA382    | <b>Mutation Type:</b>         | X Standard Knock out                 |
| <b>LexVision Name:</b>        | SEC565N1  |                               | <input type="checkbox"/> Conditional |
| <b>Reference accessions:</b>  | XM_132070 | <b>Is this gene X-linked?</b> | No                                   |

---

**Required Materials:** X pKOS clone DNA(s) \_\_pKOS 41\_\_\_\_\_  
X Target Vector DNA \_\_pTV 41Bgeo\_\_\_\_\_  
X Targeted ES Cell DNA \_\_1C6\_\_\_\_\_  
X Genomic Map

---

### Southern Blot Analysis: *External/Internal Probe Strategies*

|                                        | <u>5' External</u> | <u>3' External</u> |
|----------------------------------------|--------------------|--------------------|
| Name of Probe:                         | 37 + 36            | 22 + 23            |
| Restriction Enzyme for Genomic Digest: | <b>BglII</b>       | <b>BamHI</b>       |
| Predicted Wild-type Band (kb):         | <b>11.8 kb</b>     | <b>14.9 kb</b>     |
| Predicted Mutant Band (kb):            | <b>16.1 kb</b>     | <b>10.32 kb</b>    |
| Probe Size:                            | <b>240 bp</b>      | <b>244 bp</b>      |

**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:                                | DNA382-13 | 5' Primer Name:                          | DNA382-12 |
| 3' Primer Name:                                | DNA382-11 | 3' Primer Name:                          | GT-IRES   |
| Predicted Wild-type Band (bp):                 | 202       | Predicted Wild-type Band (bp):           | none      |
| Predicted mutant band (bp)                     | none      | Predicted mutant band (bp)               | 376       |

---

**Primer sequences:****Southern probes**

DNA382-22    5' – CTGAAAGGAGAGTCCGTTCC  
DNA382-23    5' – GCTGGAGGATTGCAAGCTG  
DNA382-36    5' – GGAGCTATGACTGTGTGGC  
DNA382-37    5' – CCTTGACCTCTCTGTAGAAAC

**PCR Genotyping**

DNA382-11    5' – CAGCACACAGTAGTTCTGAG  
DNA382-12    5' – GTGGGTGCCATAGTATCAAG  
DNA382-13    5' – CTGGACATCCATGTAAGAGAG  
GT-IRES       5' – CCCTAGGAATGCTCGTCAAGA

[illegible][illegible]

[illegible]



**Selection Cassette:**

AAGAGCTTGGCGGCGAATGGGCTGACCGCTTCTCTGCTGCTTACGGTATCGCCGCTCCCGATTGCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTT  
CTTCTGAGGGGATCAATTCTCTAGAGCTCGTGATCAGCCTCGACTGTGCCTTCTAGTTGCCAGCCATCTGTTGTTTGGCCCTCCCCGTACCTTCCTTG  
ACCTTGAAGGTGCCACTCCCACTGTCTTTCTTAATAAAATGAGGAAATTGCATCGATTGTCTGAGTAGGTGTCTATTCTATTCTGGGGGTGGGGTG  
GGGCAGGACAGCAAGGGGAGGATTGGGAAGACAATAGCAGGCATGCTGGGGATGCGGTGGGCTCTATGGCTTCTGAGGCGGAAAGAACCAGCTGG  
GGCTCGATCCTCTAGAGTCGAGTACCGGGTAGGGGAGGCGCTTTTCCCAAGGCAGTCTGGAGCATGCGCTTTAGCAGCCCCGCTGGGCACTTGGCGCT  
ACACAAGTGGCCTCTGGCCTCGCACACATTCCACATCCACCGGTAGGCGCCAACCGGCTCCGTTCTTTGGTGGCCCCCTCGCGCCACCTTCTACTCCTC  
CCTAGTCAAGAAAGTTCCCCCGCCCGCAGCTCGCGTCTGCGGAGTACCCCGCCACGCGCCACACCGTCTGATCCAGACCGCCACATCGAGCGGGT  
CCGCTGAGCAATGGAAGCGGGTAGGCCTTTGGGGCAGCGGCCAATAGCAGCTTTGCTCCTTCGCTTTCTGGGCTCAGAGGCTGGGAAGGGGTGGGTCC  
GGGGGCGGGCTCAGGGGCGGGCTCAGGGGCGGGGCGGGCGCCGAAGGTCTCCGGAGGCCCGCATCTGACGCTTCAAAAGCGCACGTCTGCCG  
CGCTGTTCTCCTCTTCTCATCTCCGGGCTTTTGACCTGCACTGCGCGCCAGCTTACCATTGACCGAGTACAAGCCACGGTGGCGCTCGCCACCCGCG  
ACGACGTCCCCAGGGCGTACGCACCCTCGCCGCGCGTTCGCGGACTACCCCGCCACGCGCCACACCGTCTGATCCAGACCGCCACATCGAGCGGGT  
ACCGAGCTGCAAGAACTTCTCTACGCGCGTGGGGCTCGACATCGGCAAGGTGTGGGTGCGGACGACGCGCAGCAGTGGCGGTCTGGACCACGCC  
GGAGAGCGTCGAAGCGGGGGCGGTGTTCGCCGAGATCGGCCCGCGCATGGCCGAGTTGAGCGGTTCCCGGTGGCCGCGCAGCAACAGATGGAAGGC  
CTCCTGGGCGCGCACCGGCCCAAGGAGCCCGCGTGGTTCTTGGCCACCGTCCGGTGTCTCGCCCCACCACAGGGCAAGGCTCTGGGCAGCGCGTCTGT  
GCTCCCGGAGTGGAGGCGCGGAGCGCGGCTTCTTCTGAGACTCCGCGCCCCGCAACTCCCTTCTACGAGCGGCTCGGCTTCA  
CCGTACCGCGCGACGTGCGAGGTGCCGGAAGGACCGCGCACCTGGTGCATGACCCGCAAGCCCGGTGCTGACGCCCCCCCCACGACCGCGAGCGCCG  
ACCGAAAGGAGCGCACGACCCCATGCATCGATGATCTAGAGCTCGTGATCAGCCTCGACTGTGCCTTCTAGTTGCCAGCCATCTGTTGTTGGCCCTC  
CCCGTGCCCTTCTTGAACCTGGAAGGTGCCACTCCCACTGTCTTTCTTAATAAAATGAGGAAATTGCATCGATTGTCTGAGTAGGTGTCTATTCTATT  
CTGGGGGTGGGGTGGGGCAGGACAGCAAGGGGAGGATTGGGAAGACAATAGCAGGCATGCTGGGGATGCGGTGGGCTCTATGGCTTCTGAGGCGG  
AAGAACCAGCTATTACCTGTTATCCCTACTCGACCTCGAGGGCGCGCCATTTAATGGCCAGCGAGGCC

### **Targeted Locus:**

CCGACTAGGCCATCTTTTGATACATATGCAGCTAGAGTCAAGAGCTCAGGGGTAAGGTTAGTTCATAATGTTGTTCCACCTATAGGGTTGAAGATCCC  
TTTAGCTCCTTGGGTACTTCTCTAGCTCCTCCATTGGGAGCCCTGTGATCCATCCATTAGCTGACTGTGAGCATCCACTTCTGTGTTTGCTAGGCCCGG  
CATAGTCTCACAAGAGACAGCTACATCTGGGTCTTTTCAGTAAATCTTGCTAGTGTATGCAATGGTGTGCTGAGCATTTGGAAGTGTATTAGGGGTGAT  
CCCTGGATATGGCAGTCTCTACATGGTCCATCCTTTCATCTCAGCTCCATCTTTGTTCTGTAACCTCCTTCGATGGGTGTTTGTCTCCACTTCTAAGG  
AGGGGCATAGTGTCCACACTTCAGTCTTCATTTTCTTGAGTTTCATGTGTTTAGGAAATTGTATCTTATATCGTGGGTATCTAGGTTTGGGCTAGTAT  
CCACTTATGCAGTGAGTACATATTGTGTGAGTTCCTTTGTGATTGTGTTACCTCACTCAGGATGATGCTCTCCAGGTCCATCCATTTGGCTAGGAATTC  
ATAAATTCATTCTTTTTAATAGCTGAGTAGTAGTACTCCATTTGTGTAGATGTACCACATTTTCTGTATCCATTCTCTGTGAGGGGCATCTGGGTCTT  
TCCAGTTTCTGGCTATTATAAATAGGCTGCTATGAACATAGTGGAGCATGTGTCTTCTTACCAGTTGGGGCTTCTTCTGGATATATGCCAGGAGAG  
GTATTGCTGGATCCTCCGGTAGTACTATGTCCAATTTTCTGAGGAACCGCCAGACTGATTTCAGAGTGGTGTGTAACAGCTGCAATCCCAACAAT  
GGAGGAGTGTCTCTTTCTCCACATCCTCGCCAGCATCTGCTGTCACTGAATTTTGATCTTAGCCATTCTGTGACCCAACCTTCTAAACACTCTAACA  
TGAGGCAGCATGTACACCTTGCAGGTATTTAGGTGCTCTAAAGACACCGTGCAGGGGAGGTGACTTTGGGGAGTGTCCCTGGCTGTGCATAACCTGG  
GAACCCCACTTCAATCCTCACAACACGCTTAGGGAGTCAGTCAAAGACCAAGTACCTCTAGAAGTTGAAGGTCTCTGGGTGTGGCATGCACACA  
GCTCATTTGACCTGCAGACTCCATTCCAGCCCTGTGTACACACCCACAGTGTCACTTCCAACCTCACCTCCACCCAGCATGGCAGAAAGAGCCAG  
TAATCTCATGGTGGGCCTTTAAGGGCAATTAGACCTCACTTCAGCTAGAGAACAGACCCAAAAACACCACAGTAAATAAAGCTCATGGACCAGAAAGCT  
CAGGAGTGGGCTGGGGACTTACCCAGGGTCACACAGTCTAGTGACCAGTTTTACAGTGTCTCTGCCACAGTGTCTCAGATGTCCATAGGCTTCTATGGA  
GGTGTCTTTACAGACAAGAGGAGTGTGTCATTTATTTTGAAGAAAGCAGAAATGCTTGGCATAAAGTAAAGGAGGCTTAGGCAGTGAAGTCTAAAGC  
TCAGTAAAGATTGAGTGGGGAAGAAGTCTGTATCTGGGTGCAATCGGCTCTACTCTGGACCTCCAGCCTGCCAGCTGCTGCCATGCCACCTGCCCT  
GCCTGCCACCTACCTGCCGACCACCTGCCTGCCGACCACCTGCCTGCCTGATCACCTGCCTGCCTGCCTGCCACCTGCCTGCCTGCCACCTGCCT  
GCCTGCTCACCTGCCTGCCTGCCTGCCACCTGCCTGCCTGCCTGCCTGCCTGCCTGCCACCTGCCTGCCTGCCACCTGCCACATATC  
CTATCTGCCACCTACCAATTTGCCACCTGCCCATGTGCCACATGTGCCACATGTCCCACTGTGCCACATGTCCCACTGTGCCAACCTGCCAACTG  
CCCTGATGCCACCTGACCCCAAACTAAGGATGTGCCAAGTATGCCACAAAGCATGAGCCGATTACTTCAAATCAACCTTCTAATATATGTTGTG  
GTGGTTTGACTAGGAATAGTCACTATAAGCTGATGTATTTAAATGCTTGGTCATTAGGGAGTGGCACTACTTAAGAGGGATTAGGAGGTGTGGCTTTGT  
TGGAATAGGTGTGGTCTGTTGGAGGAAGGGTGTCACTGGGAGTGGCCTTTGGTGTAAAAAAGTTCAAGGTAGACCCAGCGTATCTCTTTTCTACTGT  
CTGAAGATCAGAATGTAGAACTAACTCTCAGGTACTTCTCCAGCACCATGTCAAGCTGCATACCATCATACTCCTGACCATGTTGACAAATGGACTAAAG  
CTCTGAAGCTGTATTAATTGAAGCCAGCCTCAATTAATTCGTTTCTTTATAAAGTGTGCCATGGTCATGGTATCTCTTTACAGCAACAGAACAGTGA  
AAGATACATGATAGGCAGATATACAGATGATAGATAGGTGGGAGAGACAGATGATTGATAGACAGACAGATAGATAGATAGATAGATAGATAGAT  
AGATAGATAGATAGCTGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAG  
ATAGATAGAAAAGATATACAGAGATAGACAGAAAGATGGAAGACATATAGTTAGATAGGTAAAAAGATAGGTGATAAGTAGATCATAGGTAAAAAG  
ACAGGCATATAATAATGAACCAAGTGAAGTGAAGTACTGATAGGAAATGATAGATTAAAAAGTGTAGATATAAGATGTAAAGGACAGACATAAATAGG  
CAGGCAGATGATAGACGGTAGAGATCTATAATACATACATCAAAACATGCATATGTGTCTCCACTATCGTATCTAGATACTACATACACAGAGCAC  
ACACAGGCTCTGGAAGTTTGTGATAGACAAAATATCCATCACCCCTGCACCGTCTCATTGAATAGAACAGTCTACAGGTCTGTGTGTACTTTCAAGTGG  
TCTAAGGGTGTTCATCCTGGCCTAAGTGCAGGAATGAAGATATATCTGTTGACTGGACCCCTCAGGGAGTCTCTACAGACCAATCCAGTGGCATCTTA  
GTGGTTTACCTTCACAGTGTCTCTTGTGTTGATGTAGTAGGCCCCCTGCATTTGGGAAAGTCTAGTAAATGACAAGGCCCATGGCATGGTCTGGCAGT  
AACAGAAGTGAGGTCAATTACTGTAAGTCCACAGTCTTTTCAACATAACTAAGCCAGGCTCTCTGGAAGACTTTTGGCTTGACCTCTCTGTAGAAAAC  
ACTGAGAAATGTTGGTAAAGCACTTCTCTTATGGCCACTGCCCCGTAGAGCCTGAACCTATGTTTGGGAGCATTGGAGTACTTTCTTCAAAGACGA  
TGTTTTCAAACCTCCCTGCCACAGCAGAGCTGAGTGTGTTGTCTTTATTCCTTCACTTGGGACTGGGTGGTCAACTTTCCACTTGGCTTTGCCAAGAGC  
CACACAGTCATAGCTCCAAAACATGTCCCATAAACATAGGGATGTCTGATCAATAGGAGCCTGCAAACTTGATCTGGCTGACTGGACTGCCTGTCC  
ACCCAGGACCAACTCTTCTCCATTAGGATGGGACACCCACCACTCAGTGGTCTTTTAAATTAATACAGGAAAGTGGGGACACCCAGCAGTGG  
CTCTTTACCTTGGAGGTGCTTCTAGTGTGCTTTGACACTGTGTACCCTCTCTCGCCTGGACCCCTCCATCAGTGGCCATGATGCTCAGTGGCTGGG  
GGTGAGATAACAGAGAAGCACTGATACCTTGGCCTGGCCATTTCAACCTTATTTTCTCATCATAGGACAGGAGCACAGAGAGCATGTGGGAAGGCT  
GTTTGTGTTCTAGCCAAGTTACACAGGGCCAGAGCAAATAGTGACTTCTGTTTCTTATGGTCTCCAGGACTTTCCCATAAACCCCTTGACAGTGAAG  
AAAGAACATTTCTTGGCCACCAGGATCATTTGGTTAGAATATGCCTATCTGAACAGACAAGAGAAAGGCCAAATAGTCTTCTCCAGAATGGCTAAAA  
AGGACCAAAGCCCTGAAAACCCAAAGTCACAGACAGCAATGCATAAGCCGATACCCCACTTTCTTAACTGTAATAAAAACCCAAACCTTAGGGAATTT  
GCAAACAATATAATCTTATTTGGTTCATGGTTCTTTGAGAAGGTTCTTAGTCCATTCTGAGGACATAGCTTTTGAACGTAACCCCTCTTCTATAAGTA  
CAGGGTGATTACAGTTCATTGTGGTGCTTAGAAAGGATGCAAAAAGACATTTGGGAGTTAAGCTGGGGGAGTTCTCTTCTGTGAGCAGAACGAGC  
TATGATGAGCTCTAGGCCTCCACCCACACCGGTGGCTTCTCACCATTGCCAACCAATACCTGAAGGCCATAGGGCTGTGTACCTTCAAGTGGCC  
TCATAGGAAGAAAGCTGATGATTGCGCGTTTAGAGTCACTTCACTGATCTGTATGCAAGACAGTACAGAAAAAAGTGTCTCAACTAGCA  
GTAGGAGCCTATGTTAGAGTGCCTCACAAAGCAAAGAAACCAGGAAGTAAAGAGGGAACCCCTCAACGGTCTACTACCACTGTGGACTTCCAGCAGCT  
ATGCTCCACTTCTAAAGGATCCACAACCACTTAAACAGTGCCACCTGCTGGGAACAGGTGTTGCAACATGTGGACCTGTGGAGGACATTGCACATT  
CAAATTTGCACATTTCAATCAACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACACCTCTACACTCT  
CCACATCTCAAGTCTAAATAGGATGCAGCTGCTACAAAGCTTGTCTACTGTTAATCCTTGTGCTCGATGTCTCCCTGTGAAGGCTACAGAATCC  
CTTTGGTTCACATTTTCAATCCAGCAGTCACTGTGCCTGACATATACAGCAAGAATCTACTTGAGAAGATAACTGGTACCTGCTTAGCCAGCCTCAGGC  
TCTATCTCTCTGCAGCATTGTTGGTAGAAAAAAGACCTGAAGAGTTCTGAACCTCATCTAAGACCCTGTAGCGGGTGAATAAGGACTCCTTCGATGCC



[illegible]

CTAAGCCTATAACTCACACCAACCCTGCTTTCCATGCCCCAAAACCTACACCAGCAGCTCTTCTGAGTCTGTAATTTGTAGGTGCCAGATTCTGGGATTCTT  
TAGCCTTTATAATTGCATTTCATTACACACACACACACAAACACACACGTGCATGTGTGCACGCATGCTCATGCACACACACACATCATTGTTCTCTGCT  
AGTCTCTTACCTGAATGCCTGCAAGTTGCCTCCTAACTGGGTTGCCAGCTCTCATCTCTTCCCTTTTCAATCAACTAATTTCCAGCAGCCAGAACAGTCC  
GTTTCAAATATAAATCAGTGGTCAAATGGCACAACCAGTCAAGGTGCTTGCTGCCAAGCCCAGCAACCTGAGAAAAATCAGCTTCTAAAAGCTGTCC  
TTTAACCTCCACACATGTCCACAGCACTCACAGTCACACACACACACACACACACACATACACACACACACACACACTTATGTAACAAAAATTTGT  
AAATATCAATTAGATCCTGCCTGTTCTCTGTTGAAAACTCTTTGAGTGAAATTTGACTTTCTCATCTTGGCCTTCAAAGCCCATATTTCTCACTACCACCG  
CTGTTCTTTATAAAGTACCTGTGGCTTTACAGTACGGGATGAGAAATCTGTTTGGTTGGCTTGCATGTTTGTGTTTCTTCCAGGGGTGACACACTTCA  
GGGAGGCAGGAGCCATGGATTCTTGTTCCTGGTGTCTTTCCACCACCTAGTACCTTGCCTGGTGGATGATCAAAGTCAGTAAGTAGGTTTGAAAGGA  
CTGGCACTGTGAACGGAGATAAGACTCCAGTTAAAGCTTTGAGATTTCCAGCTAGCCACACCCAATCTTTCCTCCTGGCAGATGTTATTTGTTGTACTGA  
GGAGAGAGTAGTTTTTGAGGCCTGCTTCATATGTTGCCAAGAAGTGTGCTGCTTGATGTTTTGGTCAGCATTGACATTTTGTATACTCATACACACAGT  
CCATGAGACACACACACACACACACACACACACACACGCTTATGTGCATGCACATACACACAAGCATGCACACACATTTGTAGGGGCTTCATCTTACA  
GTGCTCTGAGCTCTTCTATAAAAAACCGCTATAAAGGCCAGCAGCAGCAGCTGAACTCTGAGCGGAGCCTTAGCTCCCTTCCCAGGTACTACCAAACA  
TTTCACCATCAGTGTGGGCCTCCTCAAAGCATTGGCTCAGCTAGCAGGTACTTCATACCCAGGGGAATTGAAACCTGACGAGGATTATCAGCCAA  
AAATACCACGGCTTATGCTAAGTCTGTACAAAAACGCTAAGAGTATGAAACCACAGCCACATTTGCAGAAATTCAGAGCTCTTGGGACAGAGACAGG  
GACTACTCTGGCATCGATCAACTGTAGAGGTGAAGGAAAAATAGAAAAACAGTTCAGGGGAGAAGAAACGGGTGCATCAGCAGCAATAACTTGA  
CTTTATTCCCTCCACGGTGAGGCAGCCAGGAATTTATGGGCACTGCAGACACAACCTCGGAATGTTGTAGTTGCGCTCTTGAAATGCAGCCCTGGT  
GATTTTTCCAGAATGTTCTGGCTGTGGAGCAAAGTCAAGGGAATGTGCTCTGGGGAAGTGGGGAGGAGGGGGGGTGGCTCTCGGATCTCTGCTGTAG  
CTATACAGCCCCAACCCAGGTCAAGACAGATGACAGGTTACAGACGGTGACATAACCTCAATGGTACCCTTCCCCCATAGGTCTGAGCAGTTGAACCAA  
TATGATCAATGAGTTTTGTCAACTTGACACAACGAGAATCAGCTGAGAAGAGAGTCTCAATAGCAGATGTTTTAAATCAGGGTGGCTGAGGGGATGTC  
TGTTGGGAAATGGTTGTCAGGGTTGTCTTAATCTTTTCACTGGTGAGTGAAGGCAATGGCCGATGTAGGTGGTCCACACCCCTGGTTTCAGGCCCT  
GGATTATGTAACCGTGGAGAAAGCTGAGCACTAGCAGGCATGTATTCTTTCTCTCTTTTGGACGTGATGTGACCAGCTCCCTGCCTTGACTTCCCAT  
ACGATGGACTGTAACCTGGAATCATGAGTCAAATAAACTCCTCCCTCCACTAAGCTTCTATTGGTCAGACAACAGCTATGAAGCAAAGGCTGGCCTGC  
AGTTTTGGATTACCCCACTGGAAGAGGAAGGTGTGACACTGTAGCTTATGCTACTCATGCTCTCATCCTTCTGCACCCCAATGACATCACTT  
ACACAGGGTGAAGGACTCCAGTTGAGCAAGGCTCTTACAATTTTTCACTTTAGTTTATGTTAGGCTTTTCTATTGCTGTGATGAACATGTGACCACTCT  
GGGAGGAATGGGTTTATTTTCTTACACTTCCACATCACAGTCCATCATCAAAGGAGGTTCGGGGCAGGAGTTTGGGGCAGGAGCTGATGCAGAGGCC  
ATGGAGGGGTGCTGCTTACTGGCTTCTCATTGCTGTGCTCAGCTGCTTTCTTATAGCTCCCAAGACCACCTGCTCAGCTATAGCACTGCCATAACAAG  
CTGGACCATCCTGCATCAATCACCATCAGTAAATGCCCTACAAATGTGCCTATAGACAGTGCAGACAGAGGTGTTTTCTCAATTAAGAGCTTCTCTTC  
CCAAATGACTCTAGATGGTATCATACCAATAGGCTTACCAACTGGTGTCTTGTAGTGAAGGGTGACCAATAATGCCACAGATGGAACATGCCACT  
AACAGTCCACAGAAATGTGACAAACTACTGTGAGTGCATTACAAGCAGGTCCAGAGGGGAGAACAGAGAACAGCAGGAGTGGAGCCTGGATGTGGAC  
CATGCAAGCCAAGAATAAAGTTTCTTCTCTACCTTACACTACACATCAAAGAAGACTGGAGACGACAGTAAGCACAAGATGCTGTGCCAGTGTTTAG  
ACCACAGGGTGGAATGTCTTTGACCATCGGGATCAACATATTGTTTGCCAGCTATGTTTGGTGCATAAAGATGTTCCCTAAAAGGCATTCACTAGTGG  
AAAACACTGCTAATATTAGGTAATATCAATAACATAGAGGGCAGCAAGATGACTCAGAAGGTAATATGCCTGCTACACAAGCCAGAGATTCAATAT  
TACCAAGCCATATTAAAAAGTGGAAAAAGAGAAGCTGCCACCTGAAGGTTGTCTCTGACCTCAATAGGTGGACTATGGCAAGATGTGTGCATACACA  
TGCGTGCATACACAAGTAATTAACCTACATAATTTTCTTTGAGACAGGGTCTCTCTATGTATCCCTGGATGTCTTAAAACCTCGCTATTTGGACTAGGCAC  
TGAACCTACAGAGATCTGACTGCTTTTACTTCTGTGCCACCATGCCCCGAAAACAACAACAAAAATTAATCTATACATACAGTATTAAGAGCCATCAA  
AATAGTTTATAAAGACACAACAAGCAAAAAATTAACCTAAAAAATAAATCTTGTAAAAAGATATGCTGACAACCTATTTTCATTCAAATTTCTGCCAAA  
TTAAGGTGAGATAGTAAATGCTGTGAGCAAAAAATGGTAAATAAACACTGTAATCCTTCAGGAGAGCTCTTAAGGCTGTGGGAAAGCACTCTGAGAACATGA  
GTTCAAGAATTTCTTAACCTATGCAAAATATAAAGACACAATATGAATTTGTGTGAGGATCCCTAAAGACCTAAAAGAACAGAGAGGCTGCCCTGTGAG  
CCAGCTGTGCAGAAAAATACAAAGGCAAGCAGATACAAAAGCAGTCAGGTTTCTGAGTTCAAGGTCAGCTGGAACCTGAGCTAGGTTGGGCCAGGC  
ATGGTGGAATGGTAATCTCAGGATGAGACCTACCCAGCTAGCTCAATGTCTGTGCTTACAAAGGCAGGCAGATCTCTGAATTCATTTGCAATATTA  
AAAAAATAATGTGTTTCTGCTCTTCTTCTAAGATCAAGCAGTGGGCTCTTGGGATGGGATGATTGATTGAGGATAATCAAAAGGGAACCTGACTC  
AATTGATATGTAATAACAGACTGGGCTTTTGTGCTGCAAGAGATGAGTTTCTAGAGAGTTATTTTGTAGAAATGCAAGAGGCTGTCTTGAAG  
GAGAATAATCTGGAAGCTGTCTTAAACAGAACATAGGCTGTAGCTTATAACCCACGATTTGACTTCAAGTCATTCTTTTTTTTTTCAATTTATATTTA  
CTTGTTTGTGTTGTTGTTGTTTACACTCTATATTTTATTCCTCCACCCCATCCACCCTCTGACTGCTCCACATCCCATACCTCCTCCCAACCCCCCTG  
TCTCCATGTGGATGTTCCCATTCACCCCATCTCACCTCTAAACTCACTGGGGCCTCCAGTCCCTTGAGGGTTAGGTGCATCATCTCTGAATGAACAC  
AGACTTGGCAGTCCCTACTGTATGTGTGTTGGGGGCTCATATCAGCTGATGTATGCTGCCCTGTTTGGTGTGCCAGTGTTTGAGAGATGTCGGGGTCC  
AGATTGATTGAGACTGCTGGTCTCTCTACTGGATCATCCTTCTCTCAGCTTCTTTACGCCCTCCCTAATTCACAACAGGGGTCAGCTGCGTCTGTCCA  
TTGTTTGGATGCAAAATATCTGCATCTGACTCTTTCAGCTGCTTGTTGGGTCTTCCAGAGTGTAGTCATGCTGGGTCTTTTTTGTGAGTGTCTCATAGCCT  
CAGTAATGGTGTCCGGCTTGGGACCTCCCTTGAGCCGATCCCTCTTTGGGCTTGTTTTGTGCTCTCAAAACCCCTTTCTCTCAGAACCCCTCTCCA  
AGACAAGGCTGGTCTGAGAGAGAGAGAGAGAGAAATACATGAATTAATCATTTAAGTCTTTCCAGTAAACAGAGAGAGGCTTGTGCAAGCG  
ATGTGCTAAAAATTTTATGTACATCAAAATAGAAAACCTGTGTCTCAAGATTCAAACGGTTGATGCCAAAAGGGTGAAGGAACTCTACTGAGCCCTCCTTG  
CCTGAGAAGTTGGCACAAGCCTTATCCCTGTTTTAAGAGATGAATCAAAGGTGATGGATACTGAGAGGTAACGAAATCAAGGCAATTAACACGTGT  
ATTACCTCACACAGCAGCAACGATCTGTGACGAGAACATTTAAAAAAGCAGTTTACAAGCTGACTGTGCATGATTGCTAAGTGGAGTATCCCACTGG  
CCATAGGTTTTTGAGCTTGCTTTTTTTTTAACCTAAGTGATTTTTTAAATATATAATTTTCTGTTTACGTAGTGTGTATGTGATGTGTCAGGGTAT  
ACATGTCAGAGGTCAGAGGACAACCTACAGGAATCGGTCCATTCCCTTTGCCATATGAGTCCGGGGATGGACCTCAGCTTGTGACAGCTTGGTGCCAAG  
CACCTTTACCCTGGTGGGACCAAGTAAATGAAATTTTGTGTCTTTGACCAATACCTGTCTTCGTTAGGGTTACTATTGTTGTGATGAAACACCAGGACC  
AGAAGCAACTTTGGGAGGAAAAGGTTTATTTCACTCACAGTTAATATAACAGTTTCATCATCAAAAGCAGTGAGGACAGGAACTCAGGCTGGGCAGGA  
ACCTGGAGGCAGGAGCTGATGCAGAGGCCGTGGAGAGATGCTGCTTACTGACTTGTCCCCATGGCTTCTCAGCCTGGTTTTTTTTTTTTTATAAAACC  
CAGGATCATAGCACAGGCTGTGCAGCACCCACAATGTGCTGGGTCTCCACCATCAGTCACTAATTAAGAAAGTGCCCTACAGGCTTGTCTACAGCCT  
GATCTTATGGAGACTTTTTCCCTCCTCCCACTGACCCTGGCTTGTGTCAAGCTGACCAAAAACTAACCAACACGCCTCTAAGCCACACTTGTCTCTC  
CTCTCCCTTAGGACCATGTCTCCCTGCTCAGCTTCAGATGAGAGCTCAGAAAGGAAGCCACAGGTCCAGAGCCTGGAGCAGTACATTTTAAAGGGA  
TTGCTCTCACTCCCTTTGATTACAAAAGTGAGGAGACATACGCAGCCACCAAAACCAGACACTATTGCAGATGCCAAGAATTACTTGTGACAGGAGC  
CTGGTATAGCTGTCTCTGAGAGGCTCTGCCAGAACCTGACCAAAACAGA