Nucleotide sequence of a putative transcription factor recognizing the thyroglobulin promoter

Françoise Javaux[1], Gilbert Vassart[1, 2] and Daniel Christophe[1]
[1]IRIBHN and [2]Department of Genetics, Université Libre de Bruxelles, Campus Erasme, 808 Route de Lennik, 1070 Brussels, Belgium

The cDNA for a putative transcription factor was isolated from a dog thyroid cDNA expression library (1). Screening of the library with a double-stranded DNA fragment of the bovine thyroglobulin promoter, extending from −126 to −107 bp from the transcription start site (2) identified a phage harboring a 1100 bp insert. The specificity of the binding of the recombinant protein to the thyroglobulin promoter sequence was assayed in competition experiments involving unrelated fragments. A complete clone was obtained by rescreening the library with the 1100 bp insert. The full-length sequence is 2264 bp long and displays an open-reading frame of 1713 bp preceeded by a short coding region (216 bp).

REFERENCES

1. Lefort,A., Lecocq,R., Libert,F., Lamy,F., Swillens,S., Vassart,G. and Dumont,J.E. (1989) *EMBO J.* **8**, 111−116.
2. Hansen,C., Javaux,F., Juvenal,G., Vassart,G. and Christophe,D. (1989) *Biochem. Biophys. Res. Commun.* **160**, 722−731.

```
   1 CGCAGTGCCCGGATGTGAATGGATTACAATGTATCTTTCAGGGAAACCTATTATTATCAATGTGACTCCACGGGGGAGTCAATGGTGATG
  91 ATGAGGAGGAGGAGGAGGATGATGATGATGAGACACCTCTAAACTTGGAACAAGTTTAAGACTTTATAAGAGGAGAAGAAAAAAAAAAAG
 181 CCACCAACAAGATTTGTTTGAGGAAAGATTCTAACTATCCTGTATTGATATATTTTTTTTTTTTTTTAGAAACAATAAGAAAAAGTTGTTG
 271 GAATTTTTTTTTTTTTTTTAATGGTTTCTTTTTTGGGGGAGGGGATTTTGTTGCAGTTTGATGGTGGAAAATGCAAAAACCAGAGCCAGGT
 361 GCATAATCTTGTATTCTGTGGATATCCCTGGAGCAGAACTGAGTACCAGTTAAAATACTTTTTTGGGGGATACACATGTGAGATACTAAG
 451 TACTTGCAGAAGATTTTTTGTCTTTCTTTTTAAAGTCACTTTCCTTGGAATATTGTGAGCATATTTGTGGCCATTTAAGATGTTTTCACC
 541 TCCTGTGAGCAGTGGGAAAAATGGACCAACTTCTTTGGCGAGTGGACATTTCACTGGCTCAAATGTAGAAGACAGAAGTAGCTCAGGGTC
 631 CTGGGGGAACGGAGGACATCCAAGCCCGTCCAGGAACTATGGAGATGGGACTCCCTATGACCACATGACCAGCAGGGACCTTGGGTCACA
 721 TGACAATCTCTCTCCACCTTTTGTCAATTCCAGAATACAAAGTAAAACAGAAAGGGGCTCATACTCATCTTATGGGAGAGAATCAAACTT
 811 ACAGGGTTGCCACCAGAGTCTCCTTGGAGGTGACATGGATATGGGCACCCCAGGAACCCTGTCGCCCACCAAACCTGGCTCCCAGTATTA
 901 CCAGTATTCTAGCAATAACCCCCGAAGGAGGCCTCTTCACAGTAGTGCTATGGAGGTGCAGACAAAGAAAGTTCGAAAAGTTCCTCCAGG
 991 TTTGCCATCTTCAGTTTATGCTCCATCAGCAAGCACTGCCGACTACAATAGGGACTCGCCAGGCTACCCTTCCTCGAAACCAGCAGCCAG
1081 CACTTTCCCTAGCTCCTTCTTCATGCAGGATGGCCATCACAGCAGTGACCCTTGGAGCTCCTCCAGTGGGATGAATCAGCCTGGCTACGG
1171 AGGAATGTTGGGCAGTTCTTCTCATATTCCACAGTCTAGCAGCTACTGTAGCCTGCATCCACACGAACGCTTGAGCTATCCATCACACTC
1261 CTCAGCAGACATCAATTCCAGTCTTCCTCCGATGTCCACTTTCCACCGTAGTGGCACAAACCATTACAGCACCTCTTCCTGTACACCTCC
1351 TGCCAACGGGACAGACAGTATAATGGCAAATAGAGGAAGCGGGGCAGCAGGCAGCTCCCAGACTGGAGATGCTCTGGGGAAAGCACTTGC
1441 TTCGATCTATTCTCCAGATCACACTAACAACAGCTTTTCATCAAACCCTTCAACTCCTGTTGGCTCTCCTCCTTCTCTCTCAGCAGGCAC
1531 AGCTGTTTGGTCTAGAAACGGAGGACAGGCCTCATCATCTCCTAATTATGAAGGACCCTTACACTCTTTGCAAAGCCGAATTGAAGATCG
1621 CTTAGAAAGACTGGATGATGCTATTCACGTTCTCCGGAATCATGCAGTGGGCCCATCCACAGCTATGCCGGGTGGTCATGGGGACATGCA
1711 TGGAATCATTGGACCTTCTCATAATGGAGCGATGGGTGGTCTGGGCTCAGGGTATGGAACCGGTCTTCTTTCAGCCAACAGACATTCACT
1801 CATGGTCGGGGCCCATCGCGAAGACGGCGTGGCCCTGCGAGGCAGCCACTCCCTCGTGCCCAACCAGGTCCCGGTGCCACAGCTTCCCGT
1891 GCAGTCTGCGACGTCCCCTGACCTGAACCCACCCCAGGACCCTTACAGAGGCATGCCACCGGGATTGCAGGGCCAGAGCGTCTCCTCCGG
1981 CAGCTCTGAGATCAAATCCGACGACGAAGGCGATGAGAACCTGCAAGACACGAAATCTTCCGAGGACAAGAAGTTAGATGACGACAAGAA
2071 GGATATCAAATCGATTACTAGCAATAACGATGACGAGGACCTGACCCCGGAGCAGAAGGCGGAGCGCGAGAAGGAGCGGAGGATGGCCAA
2161 CAACGCCCGCGAGCGCCTGCGTCCGCGACATCAACGAGGCTTTCAAGGAGCTCGGCCGCATGGTGCAGCTCCACCTCAAGAGTGACAAGC
2251 CCCAGACCAAGCTCCTGATCCTCCACCAGGCCGTGGCCGTCATCCTCAGCCTGGAGCAGCAAGTTCGAGAAAGGAATCTGAATCCGAAAG
2341 CCGCGTGTCTGAAAAGAAGGGAGGAAGAGAAGGTGTCCTCAGAGCCTCCCCCGCTCTCCTTGGCGGGCCCGCACCCTGGAATGGGAGATG
2431 CGTCAAACCACATGGGACAGATGTAAAAGGGTCCAAGCTGCCACATTGCTTCATTAATACAAGAGACCACTTCCTTAACAGCTGTATTAT
2521 CTTAAACCCACATAAACACTTCTCCTTCACCCCTTTTTTTTGTAATATAAGACAAGTCTGAGTAGTTATGAATCGCAGACGCAAGAGGTTT
2611 CAGCATTCCCAATTATCAAAAAACCGAAAAACACACAAAAAAAAAAAAAAAAAAAA
```