Volume 17 Number 11 1989 Nucleic Acids Research

Nucleotide sequence of the apocytochrome B gene in white sturgeon mitochondrial DNA

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Submitted April 18, 1989 EMBL accession no. X14944

The apocytochrome B gene (below) of white sturgeon (*Acipenser transmontanus*) mitochondrial DNA and some flanking sequences were subcloned into M13MP18/MP19 or puc19 (1, Buroker et al. in preparation). Nucleotide sequence was determined using the dideoxy nucleotide chain termination method (2). In this primitive vertebrate, the arrangement and transcriptional polarity of the D-loop region and the genes tRNA(Pro), tRNA(Thr), apocytochrome B and tRNA(Glu) are consistent with that observed in higher vertebrates including *Xenopus laevis* (3,4,5). Sturgeon and *X. laevis* apocytochrome B genes have nucleotide and amino acid identities of 73.0 % and 79.2 %, respectively.

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 M  A  N  I  R  K  T  H  P  L  L  K  I  I  N  G  A  F  I  D  L  P  T  P  S  N  I  S  V  W  W  N  F
ATGGCAAACATCCGAAAAACACACCCACTACTTAAAATTATTAATGGAGCATTTATTGATCTCCCCACACCCTCCAACATCTCCGTGTGATGAAATTTTG 100
G  S  L  L  G  L  C  L  I  T  Q  I  L  T  G  L  F  L  A  M  H  Y  T  A  D  I  S  T  A  F  S  S  V  A
GCTCACTCCTGGGCCTCTGCCTTATCACACAAATCCTAACAGGATTATTTCTTGCAATACACTACACAGCTGACATTTCAACAGCCTTCTCCTCTGTCGC 200
  H  I  C  R  D  V  N  Y  G  W  L  I  R  N  I  H  A  N  G  A  S  F  F  F  I  C  L  Y  L  H  V  A  R
CCACATCTGCCGAGATGTGAATTACGGATGACTAATTCGAAACATTCATGCAAACGGGGCCTCTTTCTTCTTCATCTGCTTGTATCTTCACGTGGCACGA 300
 G  M  Y  Y  G  S  Y  L  Q  K  E  T  W  N  I  G  V  I  L  L  L  L  T  M  M  T  A  F  V  G  Y  V  L
GGTATATACTACGGCTCATACCTCCAAAAAGAAACCTGAAACATCGGAGTAATCCTCTTGCTTCTCACCATAATAACCGCCTTCGTAGGATATGTACTGC 400
P  W  G  Q  M  S  F  W  G  A  T  V  I  T  N  L  L  S  A  F  P  D  I  G  D  T  L  V  Q  W  I  W  G  G
CCTGAGGACAAATGTCATTTTGAGGCGCAACCGTGATCACTAACCTCCTCTCCGCTTTCCCGGACATCGGCGACACACTAGTTCAATGAATCTGAGGCGG 500
  F  S  V  D  N  A  T  L  T  R  F  F  A  F  H  F  L  L  P  F  V  I  A  G  A  S  M  I  H  L  L  F  L
CTTTTCAGTAGACAATGCCACCCTTACCCGATTCTTCGCCTTCCACTTTCTCCTACCATTCGTAATCGCCGGAGCTAGCATAATCCACCTCTTATTCCTA 600
 H  Q  T  G  S  N  N  P  T  G  L  N  S  D  A  D  K  V  T  F  H  P  Y  F  S  Y  K  D  L  F  G  F  T
CACCAAACAGGTTCAAACAACCCAACAGGACTAAACTCAGACGCGGACAAAGTAACATTCCACCCATATTTCTCATACAAAGACCTCTTCGGATTTACTT 700
L  M  L  V  G  L  T  S  V  A  L  F  S  P  N  L  L  G  D  P  D  N  F  T  P  A  N  P  L  V  T  P  P  H
TAATGCTAGTCGGACTCACCTCTGTGGCACTATTCTCCCCCAACCTCCTGGGTGACCCAGACAACTTTACACCCGCCAACCCCCTTGTCACACCCCCACA 800
  I  K  P  E  W  Y  F  L  F  A  Y  A  I  L  R  S  I  P  N  K  L  G  G  V  L  A  L  L  F  S  I  L  V
CATCAAACCCGAATGATACTTTCTCTTTGCCTACGCCATTCTCCGATCCATCCCAAACAAACTGGGCGGAGTACTAGCCCTTCTATTTTCCATTCTAGTC 900
 L  M  L  V  P  M  L  H  T  S  K  Q  R  G  N  T  F  R  P  L  S  Q  I  L  F  W  A  L  V  A  D  M  L
CTAATATTAGTACCAATACTCCACACCTCTAAACAACGAGGAAACACATTCCGACCCCTCTCTCAAATCCTATTCTGGGCCCTAGTAGCCGACATACTAG 1000
V  L  T  W  I  G  G  Q  P  V  E  H  P  F  V  L  I  G  Q  V  A  S  T  V  Y  F  A  L  F  L  I  A  L  P
TACTCACATGAATTGGAGGCCAACCAGTCGAACACCCATTCGTCTTAATCGGACAAGTAGCCTCCACAGTCTATTTCGCCCTATTTCTAATCGCCCTCCC 1100
  L  T  G  W  L  E  N  K  A  L  N  W  N
CCTGACCGGCTGACTAGAAAATAAAGCCTTAAACTGAAAC                                                             1140
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Acknowledgements

This work was supported by NSERC, B.C. GREAT Award and SFU Special Research Grant to ATB and MJS.

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