A second *Xenopus* immunoglobulin heavy chain constant region isotype gene

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A *Xenopus laevis* V_HII (1) positive clone that does not hybridize with a *Xenopus* IgM (2) probe was recovered from a spleen cDNA library. The constant region portion of the cDNA sequence, extending 1362 nucleotides (nts), has low homology to IgM (30%) and is probably IgX (3). The inferred amino acid sequence is consistent with four exons containing highly conserved cys and trp residues in the expected pattern (4) and 7 potential N-glycosylation sites (underlined). The 5' sequence is identical to the 15 nts sequence of *Xenopus* IgX reported earlier (1). The terminal secretory segment (nts 1305-1362) is interrupted, however, by an uncharacteristic stop codon (.). The functional implications of this unusual secretory segment are unknown. Complete sequence data were obtained for both strands by the dideoxy method (5) using both dITP and dGTP chemistries and a J_μ oligonucleotide primer as well as the M13-40 universal primer.

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GTACAGCATCGCACCCCTCAGTCTTTCCTCTTATTCCTCCGACAAATGTTGATTTCAGTCTAGTACAAATGGGGCTTAGTGACTGGCTAC
V T A S A P S V S P L I P . . . D N V D F M D E V T M G . L V T G Y
ATGCGAGATCCATTAGACATTCAAATATGATGGTAGCATTACAACGGTATCAGACAATGAGACCTGTCTCAGCGATGTGTAGGACTTTACACC
D A D P L D I Q . . . D G S I T T G I K T M R P V L S D V D G L Y T
CTCAGACGCCAGCTTACTATCTTAGCCTCAGAAAGAACAGTACATACAAAAGAGTAGTACACAAATTACCAACACAAAGCAGGAGAAAGTCT
L S S Q L T I L A S E . . . K H S T Y K . K V V N H Y T N T K Q E K S
TTAAAGTGTTACCCATGCGCCCTCATGTCCAGCTATTTCTGCAGTCACCAATGAGCGATGCGATTTCAGAGCAGACGATGAAACATTAAAT
L K V L P . . . N A P N V Q L F L Q S P . M S D A I S R A Q N E M I N
GCTACTGGATCTCTCTGATAAATAACTTCTACCGGACAAATCAAAGTTAAGCTGGTAAATGGAAGCAAGATGTAAGTGCGAAGCA
A T T D L L . . . I I N H F Y N G Q I K V K . L V N G K Q D V S A E A
TCAGTCCCAACCCCTTCAAGACAGAGGATGGTACCTACAGTCCAGCAGCCAACTGCGTATTCTCAAAGGGATCACAAGGGCACCAGTACTCC
S V P T P S K T E D G T Y S S S S Q L R I L K G M . M K G T Q Y S
TTGTGACGCATCTCTCTTAACCAACTACCAATATCAGCCAGACCGAACAGCATGACAACCTACAAGTGATCTCTCACA
. I V T N T S S H T T T I A H I S Q . T E Q . N D N L Q V Y P L T
CCTACATTTTCATGACCTCTACTTTCAGTCCGAATGCGAAGGTTACCTGGTGAGCAGCATGAAACCATAGAAAACCTTGACATCTCTCAAAGA
P T F N D L Y F S R N A K V T . L V S S N K T I E N F D I S . E R
GAAAAGCAGGAAATCTAGAGTTTGTCACTGAGGACTCTGTACTCCATGACAATGGGACCTATAGTGTGGCAGTATCTCTGAGTGTTCTGAGGAC
E R A G N L E F V T E D P V L E D H G T Y S V A S I L S V . A E D
CAAAGTGGGACAAAGTTCTCAACTGTAAAGAACCAAGATTGCCATCACCCTTAAGAAAACAATCTTTAAGCAGAAATGAAGGAACCTCCAAAA
. E S G D K F S . T V R S Q D L P S P V K K T I F K Q N E G T P K
GCTCCAGATGTCTATTACTTCCACCATCCGCTCAAGAACTAATCCAGCAAGAGATGGTTACACTTACCTTTGTCTAGCTGCTTAACCCCAAGGAG
A P D V Y L L P P S A Q E L I Q Q E N V T L T . F V T G F N P K E
ATCTTCATACAAATGCAAGGAGGTGTAGCATTAGCGAAGACAAATCATTAACTGTTTCTATGAAGAGTATGGCGAGCAACATCTTTATA
I F I Q . . . N Q G G V S I S E D K F I N T V P M K S D G E Q T Y F I
TATAGCAAGCTGGCCATCCAGCAGCCAAAATCAAGAGAGATGTATTACCTGGTGTGGACATGAAGCTCTACCCCTGTACATCACACAGCAA
Y S K L A I P A A K . N Q G D V F T . V V G H E A L P L Y I T Q Q
AGCATTGATAAATCAAGCGGTAAATCAAGTCTTGTCAATGTTAACCTTGTCTATGCTTAAACAGATCTCTATTAACTCTCCAGATTCTGATTGT
S I D K S S G K S S L V N V N L V M S . T D T . Y .
TTTAAGGAAAGTTGCTCCATGTTGTGTTGTGCTCTGTTTCATGTA

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References (1) Schwager et al. (1988) EMBO J. 7:2409-2415 (2) Schwager et al. (1988) Proc.Natl.Acad.Sci.USA 85:2245-2249 (3) Hus et al. (1985) J. Immunol 135:1998-2004 (4) Kokubu et al. (1988) EMBO J. 7:1979-1988 (5) Sanger et al. (1977) Proc.Natl.Acad.Sci.USA 74:5463-5467