Mouse non-histone chromosomal protein HMG-14 cDNA sequence

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We have screened a mouse liver λgt11 library with the cDNA encoding the human HMG-14 (1). Numerous clones hybridizing to the human cDNA were plaque-purified and DNA was isolated. None of these clones were digestible with EcoRI but all hybridized to the human cDNA on a Southen blot. In order to cut out the insert, each λ gt11 clone DNA was amplified by the polymerase chain reaction (2) using the λ gt11 EcoRI site sequencing primers (New England Biolabs catalogue numbers 1218 and 1222). PCR products were then cloned into the EcoRV site of pGEM-5Zf(+) vectors (Promega). Two different clones were sequenced with only 2 differences in the overlapping regions.

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GATGGTGGCGACGACTCCTGGAGCCCGTCAGTATCGGCGGAATTCCCGCGTCTCCCACCC   60
CGCGCCGCCACGATGCCCAAGAGGAAGGTTAGCGCGGATGGAGCCGCCAAGGCGGAGCCC  120
          M  P  K  R  K  V  S  A  D  G  A  A  K  A  E  P
AAGCGCCGCTCCGCGAGGCTGTCGGCCAAGCCCGCCCCTGCCAAGGTGGACGCGAAGCCG  180
 K  R  R  S  A  R  L  S  A  K  P  A  P  A  K  V  D  A  K  P
AAAAAGGCCGCGGGAAAGGATAAAGCATCAGACAAAAAAGTGCAGATAAAAGGGAAGAGG  240
 K  K  A  A  G  K  D  K  A  S  D  K  K  V  Q  I  K  G  K  R
GGAGCGAAGGGCAAACAGGCTGACGTGGCTGACCAGCAAACCACAGAGCTGCCTGCAGAA  300
 G  A  K  G  K  Q  A  D  V  A  D  Q  Q  T  T  E  L  P  A  E
AATGGAGAGACGGAAAACCAGAGTCCAGCCTCTGAAGAAGAGAAAGAAGCTAAGTCCGAC  360
 N  G  E  T  E  N  Q  S  P  A  S  E  E  E  K  E  A  K  S  D
TAAGCATCCATCACGTCTGTCAGTGGTCCCGCCTCCCTTCTTGTACAATCCAGAGGAATA  420
end
TTTTTATCAACTATTTTGTAAATGCGAGTTTTTTAGTAGCTCTAGAAACATTTTTAAAAG  480
GTGAGGGGATCCCACCTCATCTCATTTTTTAAGTGTAAATGGTTTTTTTAAGAGGTTAAA  540
TCATTTGCTGGTTGTTTATTTTTTGGTACAACCAGAAAATAGCAGGATACTGAATCAGGA  600
GAGGCTGTGACTGTCTCGGGGGTCACCATAACATTCCGTAGATGGGGCTAGTTTTATATC  660
CTATAACACAAAGTATACTAAATGGCAATTTGGCGTCTCAGTCGTGCATTCGTGTCTGAA  720
ATATTTTCAGTTCTATCTGGTCCCGTGTTTCTAGTAGAACCATTTTGTAAGAAAGCCAGT  780
CCTTGGCCCTTGCCCTGTCAGAACTGTGATGTCTGTGGTCATGGCAGTCCATTTTCCTAA  840
CAGTTGTGATAATGTGCTGTGAAAGATGGAAGTCCTGAGTCTGTTCTGTGTGTGGCGTAA  900
CATTGTGAATTGGTGGGACTGAGGATTACAGGCATTTGGTTGTTGTGAGAGGTCTTGGGG  960
GAACTTGCCGAGTCACTGGAACAAGTTCAAAGAAAAACAATACGTAGCTCTTCATTTGTG 1020
TACATGAACACAATGTGACTTCAGAGTTTGGGTACGTGAACACAGTATATGGCTCTTTTT 1080
GGGTACATGTAATAAAAATTGGAATGTCTGTACTCTGCTCCTCGACCAATAAAATCTGTT 1140
GTGAAACCAGTTGAGCGCCGGTCGCTACCATTACCAGTTGGTCTGGTGTCAAATC      1195
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Figure 1. Sequence of the mouse HMG-14 cDNA
Start and stop codons and the putative polyadenylation signals are underlined. The homology between the mouse HMG-14 and the human (1), calf (3) and two chicken (4, 5) homologous proteins are 77.8%, 76.8%, 55.8% and 49.0%, respectively.