

Genomic sequence of rat β -globin major gene

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In order to understand the complexity of rat β -like globin locus a number of clones covering the region was isolated from heterogenous genomic library prepared in EMBL 3 vector from Wistar strain animals carrying Belgrade anemia (1). The following DNA sequence which contains one entire rat β -globin gene from clone λ 14 was determined using Sanger's dideoxy sequencing method. The detailed sequence analysis and comparison with available globin gene and protein sequences indicate that this is an active β^{maj} globin gene which shares extensive homology with the mouse β^{maj} globin gene (2,3). The coding regions are underlined.

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1  GCITTTGCTTC   TCAGTGGAAA   AGTAATTTTA   ACAAGCAATT   TAGTAGTTGA
51  TTGAGCAAAT   GCATTGCAAA   AAAGAATGCT   TTTGGGACAG   CGTITTCCTC
101 AGAGGGAGTA   CCCAGAGCTG   GCACCTCTGA   GGCCAGTGGC   CCAGCATCCA
151 GGGAGAGATA   TGCTTGTGAT   CACCGAAGCC   TGATGCTGTA   GAGCCACACC
201 CTGGATTG6G   CCAATCTGCT   CACACAGBAC   AGCGAGAGCA   GGAGCCAGGC
251 AGAGCATAAA   AGGTGGGGCG   GGATCAGTCG   CTCTCAGCAT   TTGCTTCTGA
301 CATAGTTGTG   TTGACTCACA   AACTCAGAAA   CABACACCAI   GGTGCACCTG
351 ACTGATGCTG   AGAAGGCTGC   TGTTAATGGC   CTGTGGGGAA   AGGTGAACCC
401 TGATGATGTT   GGTGGCGAGG   CCCTGGGCGA   GTGGATATCC   AGGTTACAAG
451 GCAGTAGAAA   GTTTGGTGCT   TGGAGACAGA   GGTCTGCTTT   CCAGCAGGTA
501 CTAACITTTA   TTGATCTCTG   GCTATGTTTT   CCTTTGATGG   CTGCTGGTTG
551 TCTACCCCTG   GACCCAGAGG   TACTTTGATA   GCCTTGGGGG   CCTGTCTCTC
601 GCCTCTGCTA   TCATGGGTAA   CCCTAAGGTT   AAGGCCCATG   GCAAGAGGTT
651 GATAAACGCC   TTCAATGATG   GCCTGAAACA   CTTGGACACG   CTCAAAGGCA
701 CTTTTGTCTA   TCTGAGTGAA   CTCCACTGTG   ACAAGCTGCA   TGTTGATCCT
751 GAGAACTTCA   GGGTGAGTCT   GATGGGCTCC   TCACTGGGTT   TCCTTCTGT
801 GGCTTTCTTG   CTCAAATTCG   TATCAGAAGG   AAAGAGGAAG   CCACCTTAGG
851 GAGCAGTTTT   GATAATGATG   TGTGGATGTG   CCCTGTGGAG   TGTTGACAAG
901 AGTCCAGTTA   TTTTATCTCT   TATTCACAAT   CACTTCTCCC   TCTCACCTA
951 TTATTTCTATG   TTGTCAATTC   CTCTTTCTTT   GGTAAACTTT   TAATTTTCAG
1001 ATGCAGTTTT   TTCTTTTAA   AAAAATTAAT   TAACTGACTT   ATTTACTTTC
1051 CATGCGGATG   TCAGCTTCCC   CTTCTCTCTC   CTTCAGTCCAT   CTTCCTCTG
1101 CTTTCTATTA   CCTACCTCT   TTCTTTCTTC   CTCAGTCCAT   TTCTCTTTT
1151 TTTTAATGAA   CTTTTTGTTT   TCTTTTAAAT   ATTICTTAGT   AACTTGCCT
1201 GAGGACAAGG   AAGATATGTG   AGTCCCCTGT   TCITCCACAGA   GCCTCAAGAA
1251 GTAGTAGCAG   TAATTGGCTT   TCATGCCAGA   GTGGAAGAGA   AGAATATATT
1301 TTACAATAAA   TTCTGTCTGA   CATAGAATTC   CTCATTATAA   TTTTTCAGTA
1351 CTTTAAGTTG   GAAACGAAAA   CACCATTGTA   AATGABCCTG   AAGTGTCTGG
1401 TATTTTGTCT   CTGCAATTAT   GTTGATGGTT   CTCCCTCTTT   CCCACAGCTC
1451 CTGGGCAACA   TGATTTGAT   TGTGTTGGGC   CACCACCTGG   GCAAGGATTT
1501 CTCCCTCTGT   GCACAGGCTG   CCTTCCAGAA   GGTGGTGGCT   GGAGTGGCCA
1551 GTGGCCTTGG   TCACAAATAC   CACATAAACCT   CTTTTCTGTG   TCTTGTCTTT
1601 GTGCAATGCT   CAATTGTTCC   CAAGAGAGCA   TCTGTCAAGT   GTTGTCAAAA
1651 TGACAAAGAC   CTTTGAATAA   CTGTCTACTA   ATAAAAGBCA   TTTTCTACTG
1701 CAATGGTGTG   TTAAATTAAT   GTATCTCATA   GAAAGGG

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