

Nucleotide sequence of cDNA encoding mouse cytochrome c oxidase subunit Va

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A cDNA encoding mouse cytochrome c oxidase subunit Va was isolated from an Abelson virus-transformed pre-B cell library. The clone includes the complete coding region with presequence and the 3'-untranslated region. Compared with the recently published rat sequence (1), the deduced 36 amino acid presequence (see below, lower case letters) is identical except for 4 instead of 5 alanines beginning at amino acid 11 and an alanine instead of a valine at position 21. This compares with a 67% and 28% identity with the human (2) and yeast (3) presequences respectively. The predicted mature polypeptide is identical between rat and mouse. This high degree of conservation is also reflected in the nucleotide sequence (the rat sequence is written under that from mouse where they differ) with an overall identity of 96%. Northern hybridizations with this probe show a 1.1Kb band in pre-B cell mRNA suggesting a long 5'-untranslated region.

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      m l a a a l r r c t a a a a r g l l h
1  ccggtcgcgctggtggtcgccgtcatgctcgccgtgccctccgtcgctgtaccgcagccgctgcccgaggcctcctgcac 80
                                     N
                                     C
                                     gcg
p a s a p s p a a a v c s i r c y S H G S H E T D E E
81  ccgcctcggctcccagccccgcgcgctgtctgttccattcggtgctattctcatgggtcacacgagacagatgagga 160
      t                               t                               t
F D A R W V T Y F N K P D I D A W E L R K G M N T L V
161  gtttgatgctcgctgggtgacatatttcaacaagccagacattgatgcctgggaattgcytaaaggatgaatacacttg 240
      c                               g
G Y D L V P E P K I I D A A L R A C R R L N D F A S
241  ttggctatgatctggttctcagcccaaatcattgatgctgcattgacgagcatgtagacgggttaaattgattttgctagt 320
      t a g
A V R I L E V V K D K A G P H K E I Y P Y V I Q E L R
321  gctgttcgcatcttgagggtgttaaggacaaagcaggacctcataaggaaatctatccctatgtcatccaggaacttag 400
      c
P T L N E L G I S T P E E L G L D K V *
401  accaaccttaaatgaattgggaatctccactccagaggagctgggccttgacaaagtgtaaactcccttcgatgggcttc 480
      a
481  ctaaggacttaactgctattgctacttgattgaaatagttgctggaatgtttttatttgaacaaatcttctttagta 560
      c
561  tcaaacatgtaatagtaacttgagctttaataaagggaatgagtttgaactgaaaaaaaaaaaaa 628
      (-) c c

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