

## Nucleotide sequence of a full-length cDNA for arylamine N-acetyltransferase from rabbit liver

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A full-length cDNA clone encoding rabbit liver arylamine N-acetyltransferase (NAT; EC 2.3.1.5) was isolated from a  $\lambda$ gt11 expression library by concomitant screening with an oligonucleotide deduced from partial amino acid sequences (1) and with antibodies raised against the purified protein. The nucleotide sequence of the clone, designated *rnat*, consists of 1102 nucleotides and contains a single open reading frame of 870 nucleotides encoding a 290 amino acid protein (Mr 33,655 Da) with 14 of 16 tryptic peptide sequences recently determined from purified rabbit liver NAT (1). The *rnat* cDNA shows 61% and 46% sequence homology at the nucleotide and deduced amino acid level, respectively, to those of NAT from chicken liver (2).

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CTGATTGCAGGTCTCGAAACCTGAGTTTGGCTGGGAAGATAAAAATATCCCAAGTCACCTGAATTAATACTGAAGATCAACCCCTCCTTC 90
AACTTACTAAGGGTATCATGGATATTGAAGCATATTATCAAAGAATTGGTTACAAAAACCAAGGAACAATGGACTTGGAACTACTTA 180
      M D I E A Y Y Q R I G Y K N P R N K L D L E S L T
CAGACATTTTTCAGCACAGATCCGAACCTGTTCCCTATGAGAACCTTAGCATTCACTGTGGGGAGTCCATGGAGTTGGACTTAGAGGCCA 270
      D I F Q H Q I R T V P Y E N L S I H C G E S M E L D L E A I
TTTTGATCAAATTTGAGGAGGAATAGAGGTGGCTGGTGTCTCCAGGCAACTATCTTTTGTACTGGGCTTTGACTACCACCGGTTTTG 360
      F D Q I V R R N R G G W C L Q V N Y L L Y W A L T T T G F E
AGACCACAAATGTTAGGAGGGTTTGTTTATGGCAGTAATAATGACAAATACAGCACTGGCATGATTCACCTCATAGTACAGGTGACATCA 450
      T T M L G G F V Y G S N N D K Y S T G M I H L I V Q V T I N
ACGGCAGGAACTACATTGTCGATGCTGGGTTTGGACGCTCCTACCAGATGTGGCAGCCTGTGGAGTTAATTTCTGGGAAAGATCAGCCTC 540
      G R N Y I V D A G F G R S Y Q M W Q P V E L I S G K D Q P Q
AAGTGCCTTCCATATTTCCGCTTGAGAGAAGAGGGAGAAAACCTGGTACCTGGACCAAATCAGAAGACGAGCAACATGTTCCAGACCAAGAAT 630
      V P S I F R L R L E E G E T W Y L D Q I R R Q Q H V P D Q E F
TTCTTAATTCGAACCTCTGAAAAAGAAAATATACCAAAAACTCTACTGCTTTACTCTTCAACCTCGAACAATTGAAGAATTTGAGTCTG 720
      L N S E L L E K K I Y Q K L Y C F T L Q P R T I E E F E S A
CAAACACATATCTTCAAGAATCCCCATCATCTGTGTTTTAGACAAATCAATTTGTTCTTGCAGACCCAGAAAGGTGTTCACTGTTTGG 810
      N T Y L Q E S P S S V F L D K S I C S L Q T P E G V H C L V
TGGGCCCTCACCCCTCACCTCCAGGACCTACAATTATAAGGAAAAATACAGATCTGGTAGAGTTTAAAGTTCTGACTGAGGAAGAAGTGGAGG 900
      G L T L T S R T Y N Y K E N T D L V E F K V L T E E E V E G
GAGTGCAGAAAATATATTTAATATTTCTTGGGAAAAAAGCTTGGTCCAAAAATGGTCAATTTGTCTTCACTATTTAGAGTACGAGGC 990
      V L K T I F N I S L G K K L V S K N G H L S F T I
AAAAAATACCTTCTATCTTAGTACAAGTACTTAAGCTTTTATTATAAAAAATGATCAAACATGAAAAATCACAGAAAATAGGATAATAAA 1080
TTCATATGTATTATCAAAAA 1102

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**REFERENCES**

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- (2) Ohsako, S. et al. (1988) *J. Biol. Chem.* **263**, 7534-7538.