

One aspartic acid transfer RNA gene is present upstream of the U6 snRNA gene cluster in *Drosophila melanogaster*

Gokul Das, Dale Henning and Ram Reddy

Baylor College of Medicine, Department of Pharmacology, Houston, TX 77030, USA

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During the analysis of *Drosophila* U6 snRNA gene cluster (1), an RNA transcript was observed that obscured the U6 snRNA transcripts. Analysis of the DNA coding for this RNA showed that it is an aspartic acid tRNA gene. Source of DNA: *Drosophila melanogaster* Canton S. Sequencing method: Maxam and Gilbert. Genomic locus: Cytological region 96A (2).

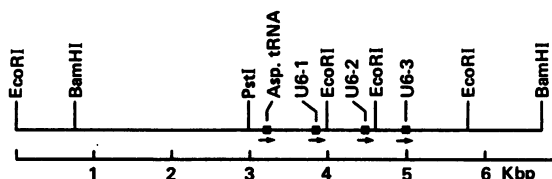


Fig. 1. Restriction map of DNA containing aspartic acid and U6 snRNA genes.

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                                GAGATTGACAA GGATTCCGGATGCCTTGGAGC -241
AAGTGGCAGCGCTCACGCGA GAGTTCGGTGAAAAACACCAG ATGTTGCTGCAGTTTCTCCT -181
CCAGCATTAAAGGCGAGTTC AGTTTTCCACAACCTCAACGA TAAACTGCAGAATTACGTA -121
GAATGTGACTATAGAGAATC TCATAAAAAGTTACAAAGAT AGGTCCTTTCAGAACCATAC -61
AGAACTAACTACGGCCACA TCCTCTATAAGAATTAGTTT TTGCTCGAATATTTTCAACG -1
TCCTCGATAGTATAGTGGTT AGTATCCCCGCTGTCAACGC GGGAGACCGGGGTTCAATTC 60
CCGTCGGGGAGAATCTGTGATTCTTTTTTTTTTCTTTTACTTTTGTATATAAACAAT +48
TTTTGTTTTAATTGAATCTA ATTTGCCATTGCTTTTAGG +86

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Fig. 2. Nucleotide sequence of *Drosophila* aspartic acid tRNA gene and flanking regions. The TATAA box, aspartic acid tRNA sequence and the putative termination signal are underlined.

Salient features: A TATAA box is found in the -30 region; the CCA sequence on the 3'-end is not coded by the gene; a cluster of T residues present 15 nucleotides downstream of the tRNA 3'-end may be the transcription termination signal. This tRNA gene could be transcribed and processed *in vitro* with *Drosophila*, rat or He La cell extracts (1). A rat aspartic acid tRNA (3) differs from *Drosophila* aspartic acid tRNA in six positions; the conservation between these two species is 92%.

References: 1. Das et al., (1986) submitted. 2. Saluz et al., (1983) Nucleic acids Res. 11, 77-89. 3. Kuchino et al., (1981) J. Biol. Chem. 256, 9059-9062

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