

Structure of a *Saccharomyces cerevisiae* gene encoding minor (AGY)tRNA<sup>Ser</sup>

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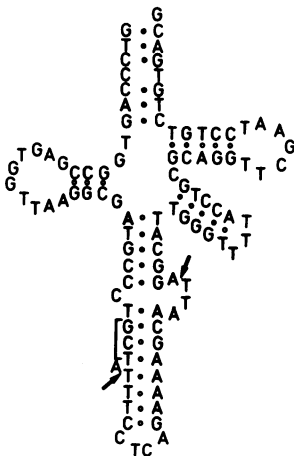
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We have cloned and sequenced a gene of *S.cerevisiae* (strain C836) encoding (AGY)tRNA<sup>Ser</sup>. The sequence of both strands of pYH82 was determined by the dideoxy chain termination method (1). Re-inspection of the sequence of pY102, a plasmid which we isolated earlier (2), revealed that it contains another copy of this gene (pos.136-35 of the original sequence). According to genomic hybridizations, there are three gene copies for (AGY)tRNA<sup>Ser</sup> in yeast. The sequence is 68% homologous to the structural part of the major tRNA<sup>Ser</sup> (e.g.2) gene, and 67% homologous to the minor (UCA)tRNA<sup>Ser</sup> or (UCG)tRNA<sup>Ser</sup> gene (3), respectively. Like the suppressor form of the minor (UCG)tRNA<sup>Ser</sup> gene (3), the gene for (AGY)tRNA<sup>Ser</sup> has a 19 bp intron, but the sequences are different. As found in the case of many other yeast tRNA genes (e.g.2), the (AGY)tRNA<sup>Ser</sup> genes are flanked by delta sequences.

pYH82

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1 ATGAAGGGCAGATGATATCCGGACCGTAGTGAGTCACTGCTTTTGGTAT  50
51 GCAACCAACTGCCGCCCCCTCTCCCGCTCTTGACCAAAACGCTAAA  100
101 GCCATTGTGTGGCTCATCCACCCTCACGCAAGTAAAGCCCGGGGCA  150
151 CAAGAAAATACGAGATCATAAACAGTTCGAGTCCGTTTATGTGTGCGGT  200
201 TTGGTACGCTTTTCGTGAGGTGTACTACCAATCATGAGAGTCGTTTTAGG  250
251 AGCTGTCAATGGAGATATGTATCTTGTGTGATGAAGTCAAAAATTTCAG  300
301 AAATTGCGCTATCCGTTTATTTTCATTGTGATTCGGGTGTAATATTAGG  350
351 GGTACAAAATATACTAGAAATTCCTCCCTCAGGATATAGGAATGCGCAA  400
401 TGGCATTGTGATGACACAAAATTTGGCAATATAACGATCATTTTTA  450
451 GATCGTTGTCAACCTCCAGTGGCCGAGTGGTTANGGEGATGCCCTGC  500
501 TATTTCTCAGAAAAGCAATAGGCATTGGGTTTTTACCTGCCAGGTTCC  550
551 AATCCTGCTGTGACCTTTTTTTTAATTTCTTTACTCCAGACAAAAGC  600
601 GGATAAAAATCCCGCATTCCGCTAAAATAATCCGGTTTTTTTTAGCA  650
651 CTCGCTGTTTTTGCCTCAACCGGTGAAAATGACGATGAGACGGCTGG  700
701 AATGCGCTGCATCCGCTTT  720
    
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- (3) Olson, M.V., Page, G.S., Sentenac, A., Piper, P.W., Worthington, M., Weiss, R.B. and Hall, B.D. (1981) Nature **291**, 464-469.