

Sequence of two tRNA genes from a *Thiobacillus ferrooxidans* ribosomal operon

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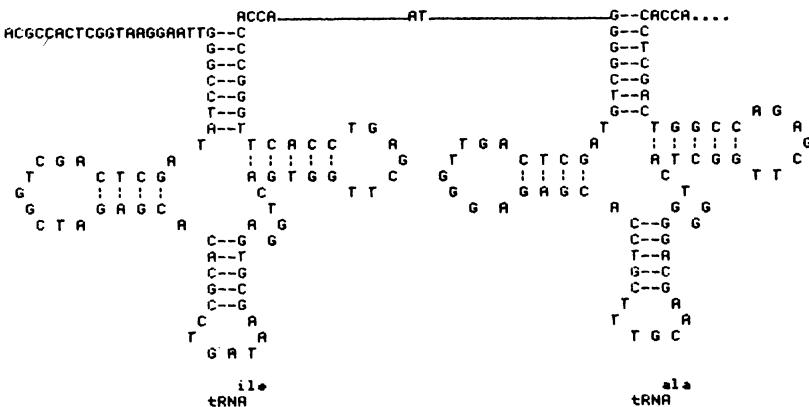
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SEQUENCE ORIGIN: Chromosomal DNA was isolated from *Thiobacillus ferrooxidans* strain A4 and a genomic library was made in pUC19. The screening was done using homologous tRNA-³²P as a probe. The clone with the highest hybridization signal was mapped with restriction enzymes and subcloned in M13mp18/mp19 for sequencing analysis.

5'-CTGCATGCGGAGAACAGGCCCTGAACTCAACTCAGGGAGCATCCAGATCAGCTCCCTTAAAGAAGGGGTCTAGACCCCCACAC-



CHGGGATAGAAGGTCCCGCAAGAGCGCGGTTCTGGGGAAACGCGTAAAGAGAAGGGGTTTACGGTTAGTGTAAGTCGTA
ATACTGCGCTTAAAGGGTGTGAGGAGTGTAGGGTCTATTGACTCCTCCACTCGGAGATTGAGTCGCTTGTGCTTGCAC
AGTTGAGGGAGGGAGGGCCTATGGTGTCTCATTCCTGGCGATGGCAGGGCTTCAGGTGAGTCTTGGGGATATGTCGTAAGTGA
ATTHAGGGCATTCGGTGTGCTCTTGGCAGGAGAACGGCGTAGAAGGACCTGGTACATCTCGCAAAAGCCTC 3'

FEATURES: No intervening sequences split coding regions. Terminal 3'-CCA sequences are gene encoded. A two-base spacer separates the tRNA gene sequences.

COMMENTS: Preliminary hybridization and sequence data indicate that this two tRNA genes are included in a ribosomal operon having a structural arrangement similar to those of rrnD from *E. coli* (1) or *B. subtilis* (2). Both tRNAs present high homology to those from *E. coli* and *B. subtilis* (3) (80.5% and 89.6% for tRNA^{ile}, and 82.9% and 84.2% for tRNA^{ala} respectively).

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