Nucleotide sequence of tryptophan tRNA from *Bacillus subtilis*

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Submitted May 26, 1992

*B. subtilis* tryptophan tRNA was isolated utilizing a dot blot hybridization method (1) and its RNA sequence including a modified nucleotide was determined by 2D TLC (2, 3) and UV spectroscopy (4). As a result, we identified five modified nucleotides, (ribothymidine (T54), pseudouridine (Ψ55, Ψ31), N6-isopentenyladenosine (i6A37) and dihydrouridine (D20)).

In *B. subtilis*, it has been reported that a UGA termination codon was translated as tryptophan at low efficiency (5). However, a single tryptophan tRNA gene has been reported so far by Wawrousek et al. (6) and consequently, the anticodon sequence of the tRNA corresponding to the UGA codon comes into question. In this regard, we found that this tRNA has the anticodon 5'CCA3' and no modification in the first letter of the anticodon. The question whether this tryptophan tRNA reads a UGA codon like that of *E. coli* (7) or *B. subtilis* has another unknown isoacceptor is now under investigation.

REFERENCES


Figure. Secondary structure of *B. subtilis* tryptophan tRNA.