

Sequence of the distal end of *E. coli* ribosomal RNA *rrnG* operon

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The 3′ end of the ribosomal RNA *rrnG* operon (1) was sequenced using a 9 kb cloned fragment of *E. coli* genomic DNA. The 9 kb fragment also includes phosphatidylserine synthase (*pss*, 2) and a new gene, *witA* located between *rrnG* and *pss* in a head-to-head orientation with respect to *pss*. This has been confirmed by comparison of the physical map of the 9kb fragment and the corresponding region of *E. coli* chromosomal DNA (3) and by hybridization of chromosomal DNA with ^{32}P-labelled tRNA^{glu} (4) and nick-translated *pss* and 9kb DNAs as probes.

The DNA sequence of the 5S rRNA in *rrnG* is identical to *rrnB* except for a C instead of an A at nucleotide 12. In addition, 53 nucleotides of *rrnG* including its terminator are identical to nucleotides 6772-6824 of the *rrnB* operon (5) with the exception of nucleotides 128, 131 and 132 in *rrnG* (Fig. 1). The extensive sequence homology between the distal ends of the *rrnG* and *B* operons suggests that terminator 2 of *rrnB* may have originated by duplication of the single terminator in *rrnG*.

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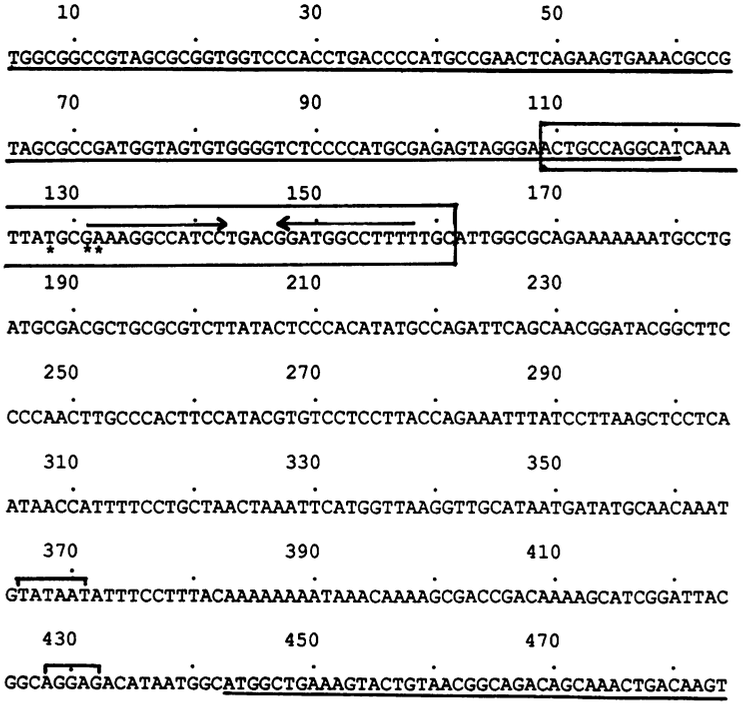

Figure 1. DNA sequence of the distal end of *E. coli* ribosomal RNA *rrnG* operon. The sequence starts at the fifth nucleotide of the 5S rRNA gene in *rrnG*. The 5S rRNA gene is underlined and its terminator indicated by arrows. The region nearly identical to *rrnB* terminator 2 is boxed, and the three different nucleotides in the region are indicated (*). The RNA polymerase binding site (TATAAT) and Shine-Dalgarno sequence (AGGAG) are bracketed. The coding region of *witA* beginning at nucleotide 443 is also underlined.

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