MCB 4403 Class project; NAME

The tRNA Genes of E. coli

Gene: proL (earlier called proW)

Gene Product: proline tRNA 2

Nucleotide count: transcript: 127 gene product: 77

Gene Product Function: adapter in protein synthesis, is aminoacylated with proline and binds to the ribosome in response to its codon on the mRNA. Codon: CCC/U. Anticodon: ggg.

Map Position: 49.2 min or 2290 Kbp

Gene cluster: None -- a single gene

Neighboring Genes: Upstream: **rplY** Downstream: **narP**

Promoter sequence: <u>ttgcaa</u>tcggtgtggaaaac<u>ggtagtat</u>tagca<u>g</u> -35 -10 +1

Terminator sequence: <u>aaaaaaccaacc</u>cttac<u>ggttggtttttt</u>

GenBank AN(s): **X52793** [Internet site(s): GenBank through NCBI: http://www.ncbi.nlm.nih.gov]

Sequence:

1 cgttttatcg ctaactgatt aattataaat cagttagcga aatatcttac ttgcaatcgg 61 tgtggaaaac ggtagtatta gcagccacga gtcggcacqt agcgcagcct ggtagcgcac 121 cgtcatgggg tgtcgggggt cggaggttca aatcctctcg tgccgaccaa aaatcccaag 181 aaaaaaccaa cccttacggt tggtttttt atatctgcaa ttaattcgat aaacagaccg 241 tgacacatca cagcctgtt atttctgtt atcagaacgt ccagaccaca cccgcctgag The proL gene is underlined, promoter and terminator are in italics. References: Komini, Y., Adachi, T., Inokuchi, H., and Ozeki, H. 1990.Genomic organization and physical mapping of the transfer RNA genes in Escherichia coli K-12. J. Mol. Biol. 212:579-598.

[two or three more should be included.]