The nucleotide sequence of *leuC* from *Salmonella typhimurium*

Eugene R. Rosenthal⁺ and Joseph M. Calvo^{*}

Section of Biochemistry, Molecular and Cell Biology, Cornell University, Ithaca, NY 14853, USA

Submitted March 29, 1990

EMBL accession no. X51476

The *leuABCD* operon of *Salmonella typhimurium* encodes enzymes involved in the conversion of α -ketoisovalerate to leucine (1). *leuC* and *leuD* encode the two polypeptides that make up isopropylmalate dehydratase (EC 4.2.1.3) (2). The nucleotide sequence of *leuD* was reported previously (3). Below is shown the nucleotide sequence of *leuC*, together with the deduced amino acid sequence of the longest open reading frame. The predicted size of the *leuC* polypeptide (464 amino acids, 49,255 daltons) agrees with values obtained experimentally (47,000, ref. 3; 51,000, ref. 4). The putative translational stop codon for *leuB* is at position 17 and the putative translational start codon for *leuD* is at position 1427.

ACKNOWLEDGEMENT

This study was supported by grant R01 GM38898 from the National Institutes of Health.

REFERENCES

1. Calvo, J.M. (1983) In K.M. Herrmann and R.L. Somerville (eds), *Amino Acids: Biosynthesis and Genetic Regulation*, Addison-Wesley, Reading, MA, pp. 267–284.
2. Margolin, P. (1963) *Genetics* **48**, 441–457.
3. Friedberg, D., Rosenthal, E.R., Jones, J.W. and Calvo, J.M. (1985) *Mol. Gen. Genet.* **199**, 486–494.
4. Fultz, P.N. and Kemper, J. (1981) *J. Bacteriol.* **148**, 210–219.

<p> TGCCGACAGAAGGGGTGTAATC P N E T P L L Y I D R H L V H E V T S R R R L T V CCA AAC GAA ACG CCG CTG CTG TAC ATC GAC CGC CAC TTG GTG CAT GAA GTC ACC TCC CGC AGG CGT TTG ACG GTC C A R T I A G T S A G K T F A T M D H N V S T Q T TGC GCG CGC ACC ATC GCC GGT ACG TCA GCA GGG AAA ACC TTC GCT ACG ATG GAT CAC AAC GTC TCG ACG CAG ACT K D I N A S G E M A R I Q M Q E L I K N C N E F G AAA GAC ATT AAT GCT TCC GGT GAA ATG GCG CGT ATC CAG ATG CAG GAG CTG ATT AAG AAC TGT AAC GAG TTC GGC V E L Y D L N H P Y Q G I V H V M G P E Q G V T L GTC GAG CTG TAT GAC CTG AAT CAC CCA TAT CAG GGC ATC GTC CAT GTG ATG GGG CCG GAA CAG GGC GTC ACC CTG P G M T I V C G D S H T A T H G A F G A L A F G I CCG GGC ATG ACC ATC GTC TGC GGC GAC TCC CAC ACC GCC ACC CAC GGC GCG TTT GGT GCG CTG GCC TTC GGC ATC G T S E V E H V L A T Q T L K Q G R A K T M K I E GGC ACT TCT GAG GTA GAA CAT GTA CTG GCG ACG CAA ACC CTG AAA CAG GGA CGC GCT AAA ACC ATG AAG ATT GAA V T G N A A P G I T A K D I V L A I I G K T G S A GTC ACG GGC AAC GCC GCG CCG GGC ATT ACC GCC AAA GAT ATC GTG CTG GCG ATC ATC GGT AAA ACC GGT AGC GCC G G T G H V V E F C G D A I R A L S M E G R M T L GGC GGC ACC GGA CAC GTG GTT GAA TTT TGC GGC GAC GCT ATC CGC GCG CTG AGT ATG GAA GGC CGC ATG ACG CTG C N M A I E M G A K A G L V A P D E T T F N Y V K TGC AAT ATG GCG ATT GAG ATG GGC GCC AAA GGC GGT CTG GTC GCC CCG GAT GAA ACC ACT TTC AAC TAC GTA AAA G R L H A P K G R D F D E A V E Y W K T L K T D D GGG CGT TTG CAC GCG CCG AAG GGC CGC GAT TTT GAC GAA GCC GTC GAG TAC TGG AAA ACG CTG AAA ACC GAT GAC G A T F D T V V A L R A E E I A P Q V T W G T N P GGC GCG ACC TTT GAT ACT GTC GTC GCC CTG CGA GCA GAA GAG ATC GCG CCG CAG GTG ACC TGG GGC ACG AAT CCG G Q V I S V T D I I P D P A S F S D P V E R A S A GGC CAG GTG ATT TCC GTC ACC GAC ATC ATC CCC GAT CCC GGC TCC TTT AGC GAT CCG GTT GAG CGC GCC AGC GCC E K A L A Y M G L Q P G V P L T D V A I D K V F I GAA AAA GCG CTG GCT TAT ATG GGC TTA CAG CCG GGC GTA CCG TTA ACG GAC GTT GCT ATC GAT AAA GTC TTT ATC G P C T N S R I E D L R A P A E V G Q R A K V A G GGC CCT TGT ACC AAT TCC CGC ATT GAA GAT TTG CGC GCG CCG GCG GAG GTC GGC CAA AGG GCC AAA GTT GCC GGC R A G A G G A G F R S G E S A A E A E G L D K I F CGT GCA GGC GCT GGT GCC GGG TTC AGG TCC GGT GAA GCA GCG GAA GGT GAC GAC AAG ATC TTT I E A G F E W R L P G C S M C V A V N N D R L N P ATC GAA GCA GGA TTT GAA TGG CGC TTA CCG GGC TGT TCC ATG TGC GTG GCC GTG AAT AAC GAC CGC CTG AAC CCG G E R C A S T S N R N F E G R Q G R G G R T H L V GGC GAG CGC GGC TCC ACC AAC CGT AAC TTT GAA GGT CGT GAG GGC CGC GGC GGT CGC ACG CAT TTA GTC S P A M A A A A V T G H F A D I R S I K AGC CCG GCG ATG GCC GCC GCT GCC GGC GTT ACC GGC CAC TTC GCC GAC ATT CGC AGC ATC AAA TAA GGAACTAC CATGGCA </p>	<p> M A K T L Y E K L F D A H V V F E A ATG GCC AAA ACG TTA TAC GAA AAA TTA TTT GAT GCC CAC GTG GTC TTT GAG GCG 75 150 225 300 375 450 525 600 675 750 825 900 975 1050 1125 1200 1275 1350 1425 1432 </p>
---	---

* To whom correspondence should be addressed

⁺Present address: Department of Biochemistry and Molecular Biology, 7 Divinity Avenue, Harvard University, Cambridge, MA 02138, USA