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Nucleotide sequence of the *fadA* and *fadB* genes from *Escherichia coli*

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A portion of the 9-kb *Bam*HI fragment (in clone #550 of Kohara's library) upstream from the *rrnA* operon at about 86-min. was sequenced, and the *fadA* and the *fadB* genes were found. The *fadA* gene showed 40.9% homology with the gene for thiolase from *Zoogloea ramigera* (1). The *fadB* showed 35.0% and 31.1% homology with 3-hydroxyacyl-CoA dehydrogenase from pig mitochondria (2) and enoyl-CoA:hydratase-3-hydroxyacyl-CoA dehydrogenase from rat peroxisomes (3), respectively. The genes formed an operon in the order of B to A, which is the opposite direction to that reported by Spratt *et al.* (4), and transcribed in a counterclockwise direction with respect to the genetic map of *E. coli*.

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AGTCCGTTCTTGTAAGGTAGCTATATGATTTTTATAGAGCGAGGCCAGTGATTCCATTTTTTACCCTTCTGTTTTTTTGACCTTAAGTCTCCGCATCTTAGCACATCGTTCATCCAGAGCGTGATTTCTGCCGAGCGTGATCAGATCGGC
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                                                                                                                                                fadB  M  L  Y  K  G  D  T  L  Y  L  D  W  L  E  D  G  I  A
GAACTGGTATTTGATGCCCCAGGTTCAGTTAATAAACTCGACACTGCGACCGTCGCCAGCCTCGGCGAGGCCATCGGCGTGCTGGAACAGCAATCAGATCTAAAAGGGCTGCTGCTGCGTTCGAACAAAGCAGCCTTTATCGTCGGTGCT
E  L  V  F  D  A  P  G  S  V  N  K  L  D  T  A  T  V  A  S  L  G  E  A  I  G  V  L  E  Q  Q  S  D  L  K  G  L  L  L  R  S  N  K  A  A  F  I  V  G  A
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D  I  T  E  F  L  S  L  F  L  V  P  E  E  Q  L  S  Q  W  L  H  F  A  N  S  V  F  N  R  L  E  D  L  P  V  P  T  I  A  A  V  N  G  Y  A  L  G  G  G  C
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E  C  V  L  A  T  D  Y  R  L  A  T  P  D  L  R  I  G  L  P  E  T  K  L  G  I  M  P  G  F  G  G  S  V  R  M  P  R  M  L  G  A  D  S  A  L  E  I  I  A
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A  G  K  D  V  G  A  D  Q  A  L  K  I  G  L  V  D  G  V  V  K  A  E  K  L  V  E  G  A  K  A  V  L  R  Q  A  I  N  G  D  L  D  W  K  A  K  R  Q  P  K
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A  L  N  L  E  N  K  S  F  V  P  L  A  H  T  N  E  A  R  A  L  V  G  I  F  L  N  D  Q  Y  V  K  G  K  A  K  K  L  T  K  D  V  E  T  P  K  Q  A  A  V
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I  D  G  L  K  L  A  G  V  I  S  T  I  H  P  T  L  D  Y  A  G  F  D  R  V  D  I  V  V  E  A  V  V  E  N  P  K  V  K  K  A  V  L  A  E  T  E  Q  K  V
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R  Q  D  T  V  L  A  S  N  T  S  T  I  P  I  S  E  L  A  N  A  L  E  R  P  E  N  F  C  G  M  H  F  F  N  P  V  H  R  M  P  L  V  E  I  I  R  G  E  K
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K  R  D  F  S  E  E  E  I  I  A  R  M  M  I  P  M  V  N  E  V  V  R  C  L  E  E  G  I  I  A  T  P  A  E  A  D  M  A  L  V  Y  G  L  G  L  P  A  F  H
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P  A  R  P  V  G  D  L  K  T  A  *     fadA  M  E  Q  V  V  I  V  D  A  I  R  T  P  M  G  R  S  K  G  G  A  F  R  N  V  R  A  E  D  L  S  A  H  L  M
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G  G  A  I  A  L  G  H  P  L  G  C  S  G  A  R  I  S  T  T  L  L  N  L  M  E  R  K  D  V  Q  F  G  L  A  T  M  C  I  G  L  G  Q  G  I  A  T  V  F  E
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R  V  *
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