

Complete nucleotide sequence of the *tycA* gene coding the tyrocidine synthetase 1 from *Bacillus brevis*

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Submitted October 26, 1988

Accession no. X13237

We have recently reported the cloning and characterization of the *tycA* gene encoding the tyrocidine synthetase 1 from *Bacillus brevis* ATCC 8185 (1, 2). The enzyme initiates the biosynthesis of the cyclic decapeptide antibiotic tyrocidine by activating and racemizing the first amino acid phenylalanine. In this paper we present the complete nucleotide sequence of this gene and its promoter region as determined on both strands.

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1   ctggtggatcgcaaatcacatgccaaactgctggtggttctctgaaacaaattccgtggagccagca
2   tggttcaaaccttttctctaaaaagctgctcagctcaaaaagaggggtaggaattgctgctttttatca
3   catgccccttttcaagaagctctggcagctgtagcagcaaatagctgctccagatagcagcaacagaaa
145  aacccctctcgttttccgttagaagaaattctcgtttcccgatataagcaatctatggtctgtgaca
217  tataaaaaatttaattgtagaataatttatcgtcaaaatagccgctgctctcttttatagacaa
289  gttgaaaagaaaataatgtagcagcggcgaacagcaaatcagctgtctccacaaagaaaacacgcttg
361  ccgcttattgattacgcaagcgggagcaggttgcgaagcaaaactggatttagctaaaaaggtgtaaaa
433  aaactgttgaatttttgcasaatccctatttttaactgcaattccaaattttctcgtctaatgagt
505  ttcagcctcagtaacctagtgctttcagcctgtcagccgctcggggaaacttccctgattggttttcatgc
577  atcagcttttcccttgcagcgttaagcagcgtatccggcagccgaaatcaccagcaccattttccgctac
649  agcctgagcaaaatgacttttagtataaggaattccccagaaacagaaattttctctgttttaaaatt
721  accaaaattgaaataagggaaaattggaattggaacgctgacctgtcctctcttcttggcaaccattccg
793  tcacattcatgataagcagaaatattccattatcggagggacatatttagcaaatcagggcaatttcc
865  tcgacaacaaagccggaattgagcagcattccgctagttccatagcaccagggcaagtcacatcaattgt
937  tcgaggaacaagcagagcctttccagaccggcttgcattcgttttgaacacagggcgctttctgtatcagg
1009 agtggaaacagaaagcaattcaactggcgaagagccttgcctgaaacaggggtgcaaaaacagacagcattc
1081 gttgtagcttgggaaagctcagcaaaaattcgaattgcaattgcaattgcaattgcaattgcaattgca
1153 tgccttccagactgaaatattcccccagatcgcacatcaataatttttggagatgattcaaacgaaattc
1225 ttaccaaaaagggctcagccagctcctgtgatcagctcgggtacagcggagagctgattgtatcagc
1297 aacagcttgcagcctcagcagactgccaattcgcaccagccagcaagcctaccagatttgcctattt
1369 acacctcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc
1441 tttccaaaattcgtttggcgtcaccgagcaagcagcagcagcagcagcagcagcagcagcagcagcagc
1513 cgtttgggaaattgctcagcctttgctgtctcggcgcagcctgacattccttccaaacagacagcattc
1585 gttgtagcttgggaaagctcagcaaaaattcgaattgcaattgcaattgcaattgcaattgcaattgca
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1729 taacaaaattgaaagcaaaactcaggtacataaattgcatacggccgagcagcagcagcagcagcagc
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2017 gcaaaaattgaccagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc
2089 tgcacctcagcagaggcctacactcctgacgacatcagatcagcagcagcagcagcagcagcagcagc
2161 aacacatcagcagaggcctcgtgctattgacagagagatcaaacagcgggacagatatttggccctat
2233 tttgcgaaacagaaagcaactcctgcccagctcagacatcagcagcagcagcagcagcagcagcagcagc
2305 catctttatttgcctcaagctggcaaaaaatgcccgttaccgcaaatgcaaaagcctccgcaaaagctc
2377 agcctgatcttaccgcaaaccaaaagcagcctgcccactcctcctcagcagcagcagcagcagcagcagc
2449 tctccatttggcaaaaacttttgggaattgaaaagatcgggattcggcagatatttttctcggctcggc
2521 attcagctcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc
2593 tgaattaccagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc
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2737 gcaaccaaactcgtctgctcattcgcgcccgaagccttgcattcctaaagctcattcaaaagctcagcag
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2881 gcttgggtagcaattatcagatttcttcttataatcagcagcagcagcagcagcagcagcagcagcagcagc
2953 aagcagagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc
3025 agccttaccagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc
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3241 actgggagagctcgaatcgaagcaaaaaatgctcctcggcaagcagcagcagcagcagcagcagcagcagc
3313 aaaaagcctgctcgaacaatcgggatacggcctcaccgggaagagaccgagcagcttggtagcagcagc
3385 agcctcattcaaacggaattcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc
3457 ttcgcaaaatcattatattgagggaccagcggcagcagcagcagcagcagcagcagcagcagcagcagcagc
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3961 tcaaaaagcattcgtttcattcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagcagc
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4105 cagatgttggccaccattttcaggggcaactcggctccttatttccatttttatcatttataaaacataa
4177 acatatatccagagtcgctaattagctgatttagcaaaagcaaaagctcagcagcagcagcagcagcagc
4249
    
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Acknowledgements: This study was supported by the Deutsche Forschungsgemeinschaft (SFB9-D6) and the Technische Universität Berlin (FGS-B2)

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