

Supplementary information

Efficient Production of Lumichrome by *Microbacterium* sp. TPU3598

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GATGAACGCT GGCGGCGTGC TTAACACATG CAAGTCGAAC GGTGAACACG 50
GAGCTTGCTC TGTGGGATCA GTGGCGAACG GGTGAGTAAC ACGTGAGCAA 100
CCTGCCCTG ACTCTGGGAT AAGCGCTGGA AACGGCGTCT AATACTGGAT 150
ATGTGACGTG ACCGCATGGT CTGCGTCTGG AAAGAATTC GGTTGGGGAT 200
GGGCTCGCGG CCTATCAGCT TGTTGGTGAG GTAATGGCTC ACCAAGGCGT 250
CGACGGGTAG CCGGCCTGAG AGGGTGACCG GCCACACTGG GACTGAGACA 300
CGGCCAGAC TCCTACGGGA GGCAGCAGTG GGAATATTG CACAATGGGC 350
GCAAGCCTGA TGCAGCAACG CCGCGTGAGG GACGACGGCC TTCGGGTTGT 400
AAACCTCTTT TAGCAGGGAA GAAGCGAAAG TGACGGTACC TGCAGAAAAA 450
GCGCCGGCTA ACTACGTGCC AGCAGCCGCG GTAATACGTA GGGCGCAAGC 500
GTTATCCGGA ATTATTGGGC GTAAAGAGCT CGTAGGCGGT TTGTGCGGTC 550
TGCTGTGAAA TCCGGAGGCT CAACCTCCGG CCTGCAGTGG GTACGGGCAG 600
ACTAGAGTGC GGTAGGGGAG ATTGGAATTC CTGGTGTAGC GGTGGAATGC 650
GCAGATATCA GGAGGAACAC CGATGGCGAA GGCAGATCTC TGGGCCGTAA 700
CTGACGCTGA GGAGCGAAAG GGTGGGGAGC AAACAGGCTT AGATACCCTG 750
GTAGTCCACC CCGTAAACGT TGGGAAGTAG TTGTGGGGTC CATTCCACGG 800
ATTCCGTGAC GCAGCTAACG CATTAAAGTTC CCCGCCTGGG GAGTACGGCC 850
GCAAGGCTAA AACTCAAAGG AATTGACGGG GACCCGCACA AGCGGCGGAG 900
CATGCGGATT AATTCGATGC AACGCGAAGA ACCTTACCAA GGCTTGACAT 950
ATACGAGAAC GGGCCAGAAA TGGTCAACTC TTTGGACACT CGTAAACAGG 1000
TGGTGCATGG TTGTCGTCAG CTCGTGTCGT GAGATGTTGG GTTAAGTCCC 1050
GCAACGAGCG CAACCCTCGT TCTATGTTGC CAGCACGTAA TGGTGGGAAC 1100
TCATGGGATA CTGCCGGGGT CAACTCGGAG GAAGGTGGGG ATGACGTCAA 1150
ATCATCATGC CCCTTATGTC TTGGGCTTCA CGCATGCTAC AATGGCCGGT 1200
ACAAAGGGCT GCAATACCGC GAGGTGGAGC GAATCCCAA AAGCCGGTCC 1250
CAGTTCGGAT TGAGGTCTGC AACTCGACCT CATGAAGTCG GAGTCGCTAG 1300
TAATCGCAGA TCAGCAACGC TCGGGTGAAT ACGTTCCCGG GTCTTGTACA 1350
CACCGCCCGT CAAGTCATGA AAGTCGGTAA CACCTGAAGC CCGTGGCCTA 1400
ACCCTTGTGG AGGGAGCCGT CGAAGGTGGG ATCGGTAATT AGGACTAAGT 1450
CGTAACAAGG TAGCCGTACC GGAAGGTGC 1479

Fig. S1 16S rDNA sequence of *Microbacterium* sp. TPU3598.

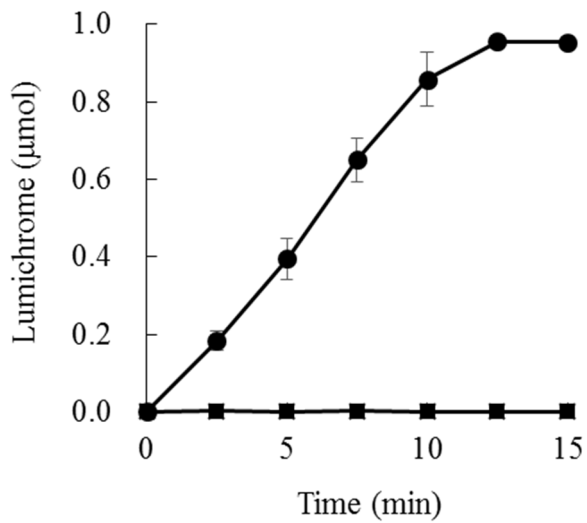


Fig. S2 Time course of lumichrome production with cell-free extract and debris.

Lumichrome production was carried out for 15 min in 10 ml of 20 mM KPB, pH 7.0, containing 1.0 µmol of riboflavin (●: cell debris, ■: cell-free extract). Error bars indicate the standard deviations of three times. The cell-free extract and cell debris were prepared from 200 mg of cells, which were cultivated in 10 ml of the nutrient medium, pH 7.0, at 30°C for 24 h, by disruption with Multi-beads Shocker (Yasui Kikai, Osaka, Japan) (2700 rpm, 60 s on time, 60 s off time, 6 cycles, 0.1 mm YGB01 glass bead, 4 °C) and centrifugation (at $22,300 \times g$, 20 min, 4°C).