

# Complete Genome Sequence of the Thermophilic Bacterium *Thermus* sp. Strain CCB\_US3\_UF1

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***Thermus* sp. strain CCB\_US3\_UF1, a thermophilic bacterium, has been isolated from a hot spring in Malaysia. Here, we present the complete genome sequence of *Thermus* sp. CCB\_US3\_UF1.**

*Thermus* spp. are Gram-negative, aerobic, nonsporulating, and rod-shaped thermophilic bacteria (3). Members of the genus *Thermus* have potential in biotechnological applications as sources of thermostable DNA polymerase used in PCR techniques (10, 11). Here, we report the complete genome sequence of *Thermus* sp. strain CCB\_US3\_UF1, isolated from a hot spring in Ulu Slim, Perak, Malaysia, at 92.4°C, pH 7.

The genomic DNA of *Thermus* sp. CCB\_US3\_UF1 was extracted using a modified phenol-chloroform protocol (5). The whole-genome sequencing of *Thermus* sp. CCB\_US3\_UF1 was performed using Roche 454 and Solexa paired-end sequencing technology. A 3-kb genomic library was constructed, and 97,991 paired-end reads and 54,397 single-end reads were generated using the GS FLX system, providing 21.14-fold genome coverage. A total of 3,469,788 reads from the 3-kb library were produced to reach a depth of 115-fold coverage with an Illumina Solexa GA IIX (Illumina, San Diego, CA). These reads were mapped to the scaffolds using the Burrows-Wheeler alignment (BWA) tool (7).

The complete genome of *Thermus* sp. CCB\_US3\_UF1 is composed of a single circular chromosome of 2,243,772 bp and a plasmid of 19,716 bp, with G+C contents of 68.6% and 65.6%, respectively. There are 2,247 predicted coding sequences (CDS), 2 rRNA operons, and 48 tRNA genes. There are 32 predicted CDS in the plasmid. The automated annotation of the genome was done using the DIYA (Do-It-Yourself Annotator) pipeline (12). Open reading frames (ORFs) were identified using Glimmer3 (4), followed by a protein similarity search using BLAST (1) against UNIREF (13), RPS-BLAST against CDD (9), and Asgard (2). Transfer RNAs were predicted by using tRNAscan-SE (8), while ribosomal RNAs were identified by using RNAmmer (6).

The genome reveals that *Thermus* sp. CCB\_US3\_UF1 possesses numerous transporters for efficient substrate and nutrient uptake and for utilization of various energy sources.

**Nucleotide sequence accession numbers.** The genome sequences of *Thermus* sp. CCB\_US3\_UF1 have been deposited in GenBank under accession numbers CP003126 (chromosome) and CP003127 (plasmid).

## ACKNOWLEDGMENT

This work was supported by APEX funding (Malaysia Ministry of Higher Education) to the Centre for Chemical Biology, Universiti Sains Malaysia.

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Received 26 November 2011 Accepted 12 December 2011

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doi:10.1128/JB.06589-11