

# Draft Genome Sequence of *Bacillus plakortidis* P203<sup>T</sup> (DSM 19153), an Alkali- and Salt-Tolerant Marine Bacterium

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***Bacillus plakortidis* P203<sup>T</sup> is a Gram-positive, spore-forming, and alkali- and salt-tolerant marine bacterium. Here, we report the 3.97-Mb draft genome sequence of *B. plakortidis* P203<sup>T</sup>, which will promote its fundamental research and provide useful information for genomic taxonomy and phylogenomics of *Bacillus*-like bacteria.**

Received 8 December 2015 Accepted 11 December 2015 Published 4 February 2016

**Citation** Wang J-P, Liu B, Liu G-H, Ge C-B, Xiao R-F, Zheng X-F, Shi H. 2016. Draft genome sequence of *Bacillus plakortidis* P203<sup>T</sup> (DSM 19153), an alkali- and salt-tolerant marine bacterium. *Genome Announc* 4(1):e01690-15. doi:10.1128/genomeA.01690-15.

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The type strain P203<sup>T</sup> (=CIP 107762<sup>T</sup>) of *Bacillus plakortidis* was isolated from material from the sponge *Plakortis simplex* and identified as a novel halo- and alkali-tolerant species of the genus *Bacillus* (1). Up to now, no additional information of *B. plakortidis* has been obtained, except that it can be found in an extremely alkaline bauxite residue site of an alumina industrial plant (2). Because of no available genomic information of *B. plakortidis*, its type strain P203<sup>T</sup> was selected as one of the research objects in our genome sequencing project for genomic taxonomy and phylogenomics of *Bacillus*-like bacteria. Here, we present the first draft genome sequence of *B. plakortidis*.

The genome sequence of *B. plakortidis* P203<sup>T</sup> was obtained by paired-end sequencing on the Illumina HiSeq 2500 system. One DNA library with an insert size of 456 bp was constructed and sequenced. After filtering of the 0.55-Gb raw data, the 0.53-Gb clean data were obtained, providing approximately 134-fold coverage. The reads were assembled via SOAPdenovo software version 1.05 (3), using a key parameter K setting at 76. Through the data assembly, 44 scaffolds with a total length of 3,967,762 bp were obtained, and the scaffold *N*<sub>50</sub> was 227,279 bp. The average length of the scaffolds was 90,176 bp, and the longest and shortest scaffolds were 535,841 bp and 673 bp, respectively. A total of 96.36% clean reads could be aligned back to the genome, which covered 98.19% of the sequence.

The annotation of the genome was performed using the NCBI Prokaryotic Genomes Automatic Annotation Pipeline (PGAAP) ([http://www.ncbi.nlm.nih.gov/genome/annotation\\_prok](http://www.ncbi.nlm.nih.gov/genome/annotation_prok)) utilizing GeneMark, Glimmer, and tRNAscan-SE tools (4). A total of 4,216 genes were predicted, including 4,143 coding sequences, 68 tRNAs, and 5 rRNAs. There were 2,988 and 1,816 genes assigned to the COG and KEGG databases, respectively. The average DNA G+C content was 39.79%, agreeing with the value 41.1 mol% (1).

**Nucleotide sequence accession numbers.** This whole-genome shotgun project has been deposited at DDBJ/EMBL/GenBank un-

der the accession number [LJJD00000000](https://doi.org/10.1128/genomeA.01690-15). The version described in this paper is the first version, LJJD01000000.

## ACKNOWLEDGMENTS

This work was supported by grants from the National Natural Science Foundation of China (grant 31370059); the Fujian Key Science and Technology Special Projects—Key Agricultural Science and Technology Special Project (grant 2015NZ0003); the Scientific Research Foundation for Returned Scholars, Fujian Academy of Agricultural Sciences (grant YJRC2014-1); and the Seed Industry Innovation Project of Fujian Province—“Fujian Resource Preservation Center of the *Bacillus*-like Bacteria” (FJZZZY-1544).

## FUNDING INFORMATION

The funders had no role in study design, data collection and interpretation, or the decision to submit the work for publication.

## REFERENCES

- Borchert MS, Nielsen P, Graeber I, Kaesler I, Szewzyk U, Pape T, Antranikian G, Schäfer T. 2007. *Bacillus plakortidis* sp. nov. and *Bacillus murimartini* sp. nov., novel alkalitolerant members of rRNA group 6. *Int J Syst Evol Microbiol* 57:2888–2893. <http://dx.doi.org/10.1099/ijs.0.65177-0>.
- Krishna P, Babu AG, Reddy MS. 2014. Bacterial diversity of extremely alkaline bauxite residue site of alumina industrial plant using culturable bacteria and residue 16S rRNA gene clones. *Extremophiles* 18:665–676. <http://dx.doi.org/10.1007/s00792-014-0647-8>.
- Li R, Zhu H, Ruan J, Qian W, Fang X, Shi Z, Li Y, Li S, Shan G, Kristiansen K, Li S, Yang H, Wang J, Wang J. 2010. *De novo* assembly of human genomes with massively parallel short read sequencing. *Genome Res* 20:265–272. <http://dx.doi.org/10.1101/gr.097261.109>.
- Aziz RK, Bartels D, Best AA, DeJongh M, Disz T, Edwards RA, Formosa K, Gerdes S, Glass EM, Kubal M, Olsen GJ, Olson R, Osterman AL, Overbeek RA, McNeil LK, Paarmann D, Paczian T, Parrello B, Pusch GD, Reich C, Stevens R, Vassieva O, Vonstein V, Wilke A, Zagnitko O. 2008. The RAST server: Rapid Annotations using Subsystems Technology. *BMC Genomics* 9:75. <http://dx.doi.org/10.1186/1471-2164-9-75>.