Supplementary Information

A novel DNA-binding protein, PhaR, plays a central role in the regulation of polyhydroxyalkanoate accumulation and granule formation in the haloarchaeon *Haloferax mediterranei*

Shuangfeng Cai[1, 2], Lei Cai[1, 3], Dahe Zhao[1, 2], Guiming Liu[1, 2], Jing Han[1], Jian Zhou[1], Hua Xiang[1, 2]*

[1] State Key Laboratory of Microbial Resources, Institute of Microbiology, Chinese Academy of Sciences, Beijing, 100101, People's Republic of China; [2] University of Chinese Academy of Sciences, Beijing 100049, People's Republic of China; [3] School of Food Science and Biotechnology, Zhejiang GongShang University, Hangzhou, 310018, People's Republic of China

Figure S1 GFP expression profiles of *H. mediterranei* DF50 cells harboring the pRF reporter plasmid.

Figure S2 Multiple alignments of amino acid sequences of the representative PhaR homologs from 19 archaea species

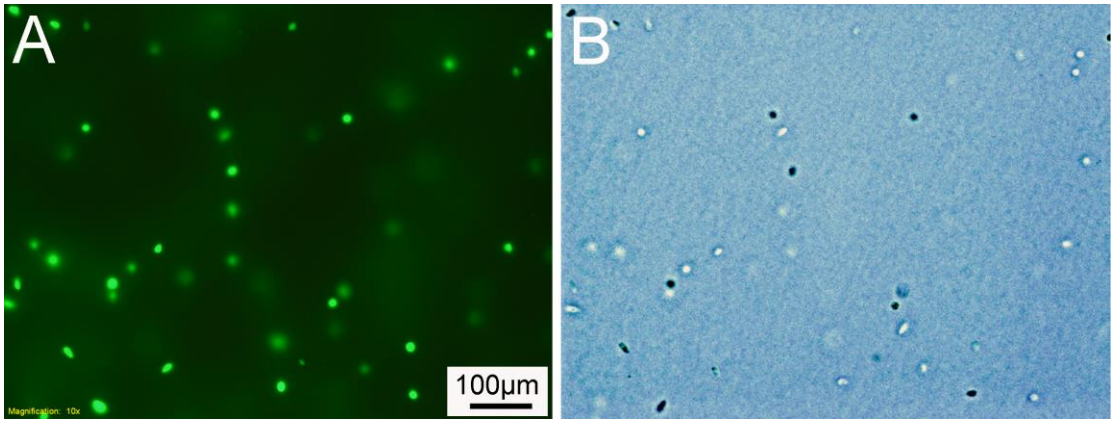

Figure S1. GFP expression profiles of *H. mediterranei* DF50 cells harboring the pRF reporter plasmid. The *gfp* gene was expressed under the control of the promoter of the *phaRP* operon. The cell cultures with an OD_{600} of 1.0 were visualized by fluorescence (A) and bright-field (B) microscopy.

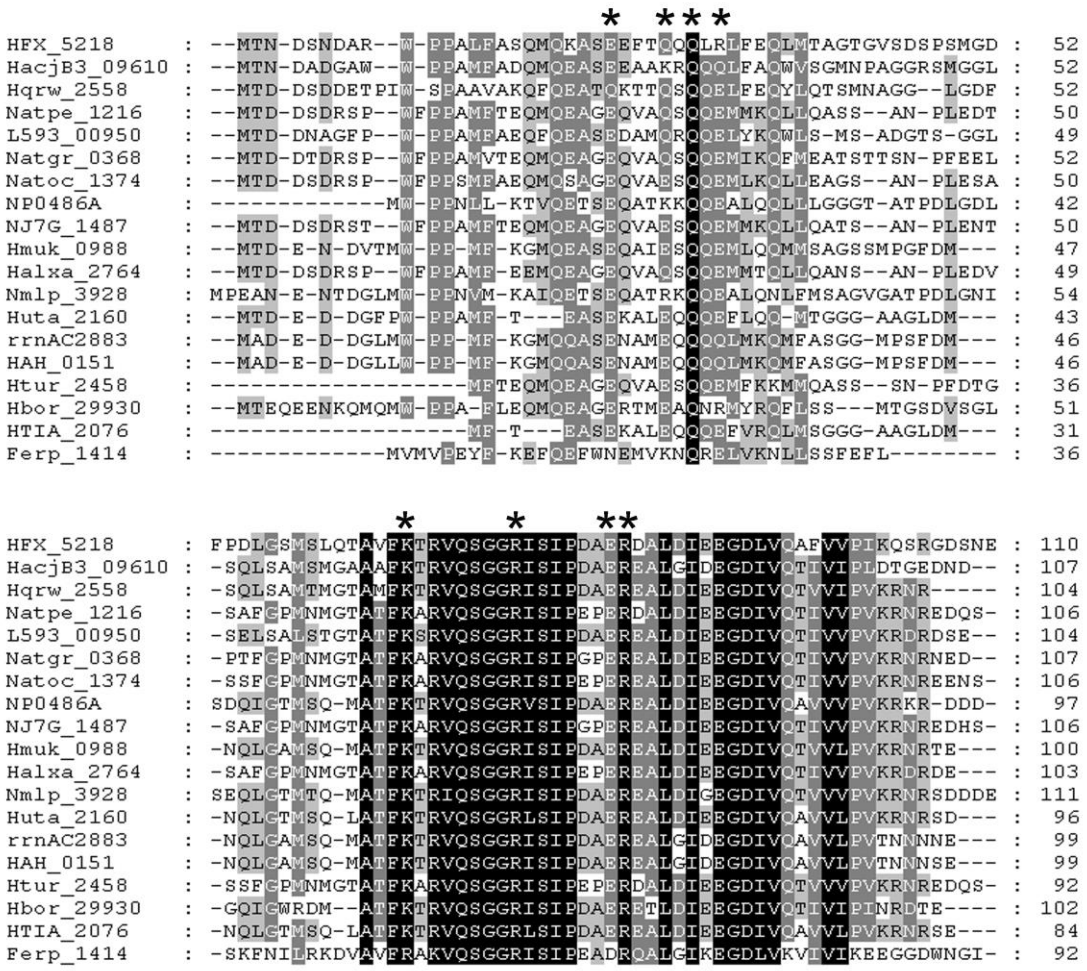

Figure S2. Multiple alignments of amino acid sequences of the representative PhaR homologs from 19 archaea species: *H. mediterranei* (HFX), *Halalkalicoccus jeotgali* (HacjB3), *Haloquadratum walsbyi* (Hqrw), *Natrinema pellirubrum* (Natpe), *Salinarchaeum sp.* Harcht-Bsk1 (L593), *Natronobacterium gregoryi* (Natgr), *Natronococcus occultus* (Natoc), *Natronomonas pharaonis* (NP), *Natrinema sp.* J7-2 (NJ7G), *Halomicrobium mukohataei* (Hmuk), *Halopiger xanaduensis* (Halxa), *Natronomonas moolapensis* (Nmlp), *Halorhabdus utahensis* (Huta), *Haloarcula marismortui* (rrnAC), *Haloarcula hispanica* (HAH), *Haloterrigena turkmenica* (Htur), *Halogeometricum borinquense* (Hbor), *Halorhabdus tiamatea* (HTIA), and *Ferroglobus placidus* (Ferp). The residues to be mutated are marked with asterisks.