

1 **Supplemental material**

2 **Transcriptional Activation of Multiple Operons Involved in**
3 ***para*-Nitrophenol Degradation by *Pseudomonas* sp. Strain WBC-3**

4

5 Wen-Mao Zhang,^{a,b} Jun-Jie Zhang,^a Xuan Jiang,^a Hongjun Chao^a and Ning-Yi Zhou^{a*}

6

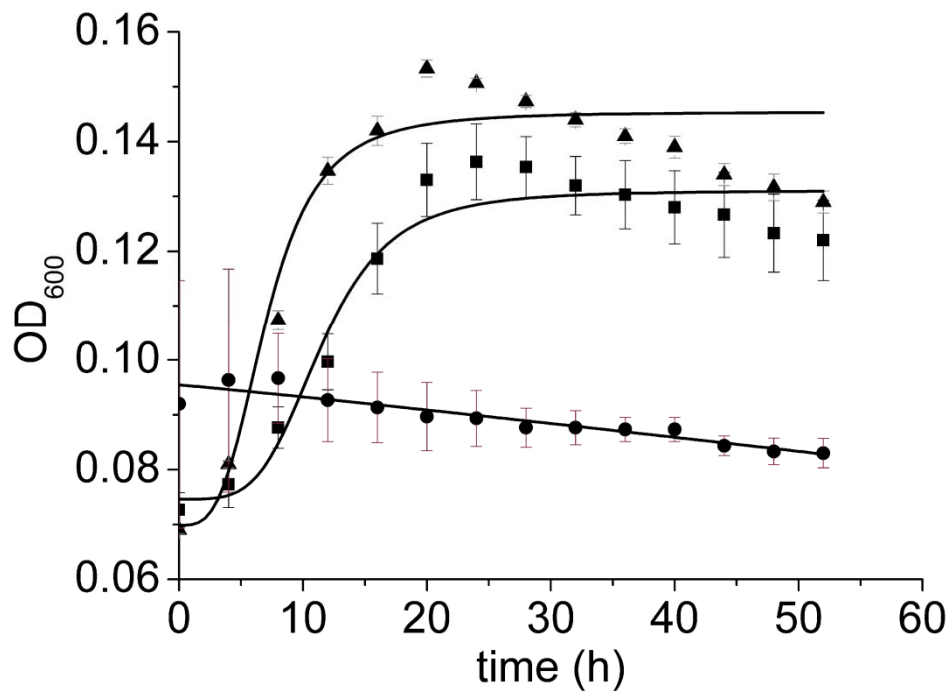
7 Key Laboratory of Agricultural and Environmental Microbiology, Wuhan Institute of
8 Virology, Chinese Academy of Sciences, Wuhan 430071, China^a; University of
9 Chinese Academy of Sciences, Beijing, 100049, China^b

10

11 *Corresponding author: Ning-Yi Zhou

12 Email: n.zhou@pentium.whiov.ac.cn; Tel: 86-27-87197655; Fax: 86-27-87197655

13



14

15 **FIG. S1** Growth curve (OD₆₀₀) of strains WBC-3, WBC3- Δ pnpR and WBC3- Δ pnpRC.

16 Strains were grown at 30°C for 52 h in PNP + MM. The values are averages of three

17 independent experiments. Error bars indicate standard deviations. Square (■) stands

18 for strain WBC-3. Circle (●) stands for strain WBC3- Δ pnpR. Triangle (▲) stands for

19 strain WBC3-*pnpRC* that the gene *pnpR* is complemented into the genome of strain

20 WBC3- Δ pnpR. The curves were fitted to Gaussian function by using Origin software.

21

22

23

24

25

26

27

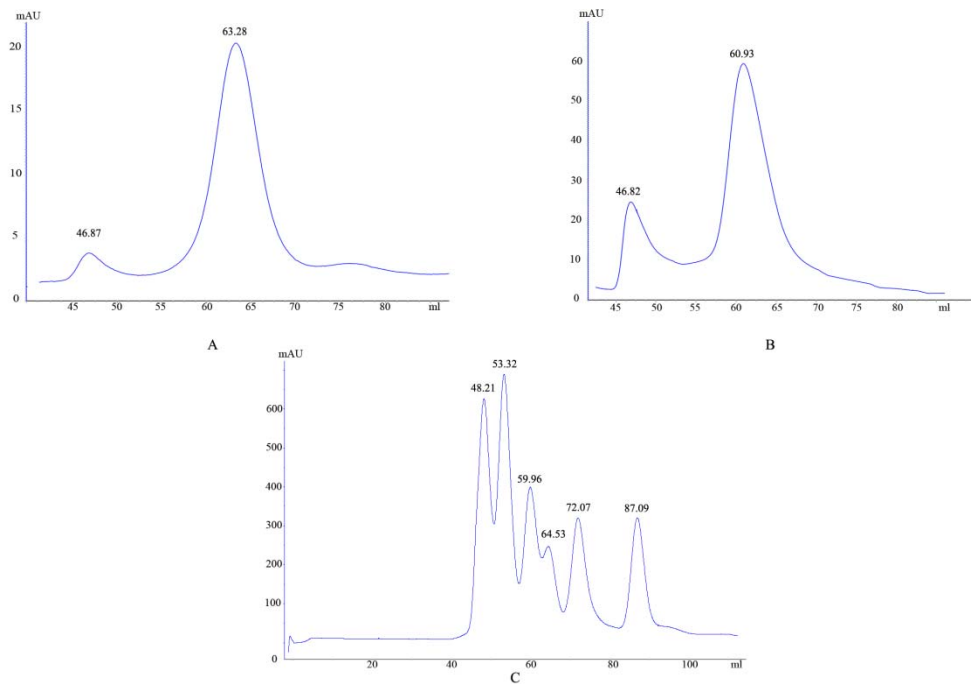
28

29

30

31

32



33

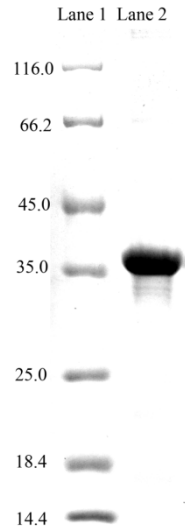
34 **FIG. S2.** Gel filtration of PnpR with and without PNP

35 A. The peak volume of protein blue dextran (2000KD) and PnpR are 46.82 and
 36 60.93 ml respectively in the absence of PNP.

37 B. The peak volume of protein blue dextran (2000KD) and PnpR are 46.87 and
 38 63.28 ml respectively in the presence of PNP.

39 C. The peak volume of protein carbonic anhydrase from bovine (29 KD), bovine
 40 serum albumin (66 KD), alcohol dehydrogenase from yeast (150 KD), β -Amylase
 41 from sweet potato (200 KD), apoferritin from horse spleen (443 KD), bovine
 42 thyroglobulin (669 KD) are 87.09, 72.07, 64.53, 59.96, 53.32, and 48.21ml
 43 respectively.

44



45

46 **FIG. S3** SDS-PAGE of purified PnpR-His₆ from strain PaW340 [pBBR1-*tacpnpR*].

47 Lane 1: Molecular mass standards (molecular masses [in kDa] are indicated on the

48 left); Lane 2: purified PnpR-His₆.

49

50



51

52 **FIG. S4** Weblogo based on alignment of the regulatory binding sites in the promoters

53 of *pnpA*, *pnpB*, *pnpC* and *pnpR*. The overall height of the stack indicates the sequence

54 conservation at that position, while the height of symbols within the stack indicates

55 the relative frequency of each nucleic acid at that position.