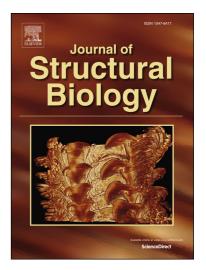
## Accepted Manuscript

Structural and biochemical characterization of bacterial YpgQ protein reveals a metal-dependent nucleotide pyrophosphohydrolase

Ye Ji Jeon, Sun Cheol Park, Wan Seok Song, Ok-Hee Kim, Byung-Chul Oh, Sung-il Yoon

| PII:<br>DOI:<br>Reference: | S1047-8477(16)30061-2<br>http://dx.doi.org/10.1016/j.jsb.2016.04.002<br>YJSBI 6895 |
|----------------------------|--|
| To appear in:              | Journal of Structural Biology  |
| Received Date:             | 23 November 2015   |
| Revised Date:              | 22 March 2016  |
| Accepted Date:             | 7 April 2016   |



Please cite this article as: Jeon, Y.J., Park, S.C., Song, W.S., Kim, O-H., Oh, B-C., Yoon, S-i., Structural and biochemical characterization of bacterial YpgQ protein reveals a metal-dependent nucleotide pyrophosphohydrolase, *Journal of Structural Biology* (2016), doi: http://dx.doi.org/10.1016/j.jsb.2016.04.002

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Page 1

ED M

Structural and biochemical characterization of bacterial YpgQ protein reveals a metal-dependent nucleotide pyrophosphohydrolase

Ye Ji Jeon<sup>1</sup>, Sun Cheol Park<sup>1</sup>, Wan Seok Song<sup>1</sup>, Ok-Hee Kim<sup>2</sup>, Byung-Chul Oh<sup>2</sup>, Sung-il Yoon<sup>1, 3</sup>\*

<sup>1</sup>Department of Systems Immunology, College of Biomedical Science, Kangwon National University, Chuncheon 200-701, Republic of Korea

<sup>2</sup>Lee Gil Ya Cancer and Diabetes Institute, Collage of medicine, Gachon University, Incheon 406-840, Republic of Korea

<sup>3</sup>Institute of Bioscience and Biotechnology, Kangwon National University, Chuncheon 200-701, Republic of Korea

\*To whom correspondence should be addressed: Sung-il Yoon, Department of Systems Immunology, Kangwon National University, 1 Kangwondaehak-gil, Biomedical Science building A-204, Chuncheon 200-701, Republic of Korea. Tel: +82-33-250-8385, Fax: +82-33-250-8380, E-mail: sungil@kangwon.ac.kr

**Running title:** Structural and biochemical studies of YpgQ

**Abbreviations:** HD, histidine-aspartate; (d)NTP, (deoxy)ribonucleoside triphosphate; bsYpgQ, *Bacillus subtilis* YpgQ; dNTP, deoxyribonucleoside triphosphate; NTP, ribonucleoside triphosphate; dNMP, deoxyribonucleoside monophosphate; Pi, inorganic monophosphate; ImYpgQ, *Listeria monocytogenes* YpgQ; saYpgQ, *Staphylococcus aureus* YpgQ; ecYedJ, *Escherichia coli* YedJ; PDB, Protein Data Bank; SAD, single-wavelength anomalous dispersion; RMSD, root mean square deviation; liYpgQ, *Listeria innocua* YpgQ; SeMet, selenomethionine; SeMet-bsYpgQ, selenomethionine-incorporated *Bacillus subtilis* YpgQ; thin-layer chromatography, TLC.

Keywords: Crystal structure, HD domain, pyrophosphate, manganese, substrate specificity

Download English Version:

## https://daneshyari.com/en/article/5913727

Download Persian Version:

https://daneshyari.com/article/5913727

Daneshyari.com