

Figure S1

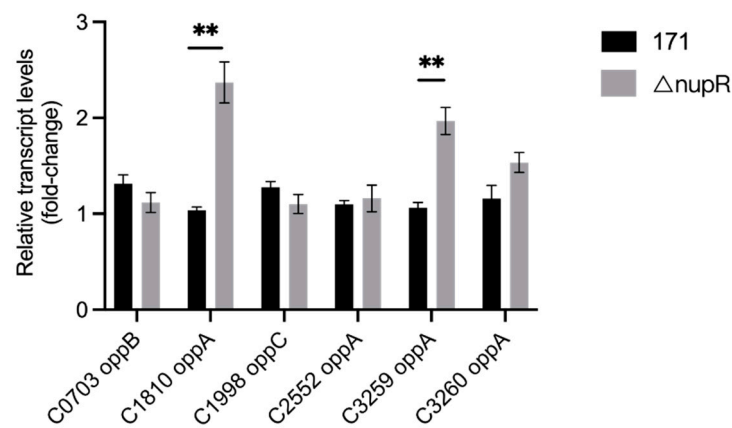


Figure S1. *opp* mRNA levels in BMB171 and  $\Delta nupR$  cultivated in SSM medium (T2). \*\*P < 0.01.

Table S1 Bacterial strains, plasmids used in this study.

Strain/ Plasmid	Description	purposes	Source (Reference)
<b>Stains</b>			
BMB171	<i>B. thuringiensis</i> strain BMB171; an acrySTALLIFEROUS mutant strain; high transformation frequency		(He et al., 2010)
$\Delta nupR$	BMB171 deleted of <i>nupR</i>		(Qin et al., 2022)
BMB171(pRB1028- <i>spo0A</i> )	BMB171 containing plasmid pRB1028- <i>spo0A</i>	gene-knockout	this study <sup>1</sup>
$\Delta spo0A$	BMB171 deleted of <i>spo0A</i>		this study
BMB171(pHT1K- <i>PnupR</i> )	BMB171 containing plasmid pHT1K- <i>PnupR</i>	$\beta$ -galactosidase assays	this study
BMB171( <i>PplcR</i> -lacZ)	BMB171 containing plasmid <i>PplcR</i> -lacZ	$\beta$ -galactosidase assays	this study
$\Delta nupR$ ( <i>PplcR</i> -lacZ)	$\Delta nupR$ containing plasmid <i>PplcR</i> -lacZ	$\beta$ -galactosidase assays	this study
171( <i>Ppap</i> )	BMB171 containing plasmid <i>Ppap</i>	$\beta$ -galactosidase assays	this study
$\Delta nupR$ ( <i>Ppap</i> )	$\Delta nupR$ containing plasmid <i>Ppap</i>	$\beta$ -galactosidase assays	this study
171( <i>Pphemo</i> )	BMB171 containing plasmid <i>Pphemo</i>	$\beta$ -galactosidase assays	this study
$\Delta nupR$ ( <i>Pphemo</i> )	$\Delta nupR$ containing plasmid <i>Pphemo</i>	$\beta$ -galactosidase assays	this study
171( <i>Pplc</i> )	BMB171 containing plasmid <i>Pplc</i>	$\beta$ -galactosidase assays	this study
$\Delta nupR$ ( <i>Pplc</i> )	$\Delta nupR$ containing plasmid <i>Pplc</i>	$\beta$ -galactosidase assays	this study
171( <i>Pmog</i> )	BMB171 containing plasmid <i>Pmog</i>	$\beta$ -galactosidase	this study

		assays	
$\Delta nupR$ ( <i>mog</i> )	$\Delta nupR$ containing plasmid <i>Pmog</i>	$\beta$ -galactosidase assays	this study
BL21(pET <i>nupR</i> )	BL21(DE3) with pET <i>nagR2</i> plasmid	protein purification	(Qin et al., 2022)
<b>Plasmid</b>			
pHT1K-lacZ	<i>B. thuringiensis</i> - <i>E. coli</i> shuttle plasmid; Amp <sup>R</sup> Erm <sup>R</sup> , pHT1K vector harboring the promoter-less <i>lacZ</i> gene, transformed into BMB171 and used for $\beta$ -galactosidase activity	$\beta$ -galactosidase assays	
<i>PplcR</i> -lacZ	<i>lacZ</i> with the promoter and the 5' non-coding region of <i>plcR</i> in Nco I and Bam HI sites of pHT1K	$\beta$ -galactosidase assays	this study
<i>Ppap</i>	<i>lacZ</i> with the promoter and the 5' non-coding region of <i>pap</i> in Nco I and Bam HI sites of pHT1K	$\beta$ -galactosidase assays	this study
<i>Phemo</i>	<i>lacZ</i> with the promoter and the 5' non-coding region of <i>hemo</i> in Nco I and Bam HI sites of pHT1K	$\beta$ -galactosidase assays	this study
<i>Pplc</i>	<i>lacZ</i> with the promoter and the 5' non-coding region of <i>plc</i> in Nco I and Bam HI sites of pHT1K	$\beta$ -galactosidase assays	this study
<i>Pmog</i>	<i>lacZ</i> with the promoter and the 5' non-coding region of <i>mogR</i> in Nco I and Bam HI sites of pHT1K	$\beta$ -galactosidase assays	this study
pRP1028	<i>B. thuringiensis</i> - <i>E. coli</i> shuttle plasmid; Amp <sup>R</sup> Erm <sup>R</sup> ; containing <i>turbo-rfp</i> gene and an I-Sce I recognition site	gene-knockout	
pRP1028- <i>spo0A</i>	pRP1028 with the upstream and downstream regions of <i>spo0A</i> , intermediate vector in gene-knockout experiments	gene-knockout	this study

<sup>1</sup> the strain or plasmid is constructed for this research and stored in our laboratory at -80°C

He, J., Shao, X., Zheng, H., Li, M., Wang, J., Zhang, Q., Li, L., Liu, Z., Sun, M., Wang, S., Yu, Z. Complete genome sequence of *Bacillus thuringiensis* mutant strain BMB171. *J Bacteriol.* 2010 Aug;192(15):4074-5.

Qin, J., Cao, Z., Cai, X., Fang, Y., An, B., Li, X., Zhang, Y., Tian, H., Hu, W., Yan, B., & Cai, J. (2022). *NupR* Responding to Multiple Signals Is a Nucleoside Permease Regulator in *Bacillus thuringiensis* BMB171. *Microbiology spectrum*, 10(4), e0154322.