

SUPPLEMENTARY INFORMATION

Tail-Anchored Inner Membrane Protein ElaB Increases Resistance to Stress

While Reducing Persistence in *Escherichia coli*

Yunxue Guo¹, Xiaoxiao Liu¹, Baiyuan Li^{1,2}, Jianyun Yao^{1,2}, Thomas K. Wood^{3,4}, and Xiaoxue Wang^{1*}

¹Key Laboratory of Tropical Marine Bio-resources and Ecology, Guangdong Key Laboratory of Marine Materia Medica, RNAM Center for Marine Microbiology, South China Sea Institute of Oceanology Chinese Academy of Sciences, Guangzhou 510301, China, ²University of Chinese Academy of Sciences, Beijing 100049, China,

³Department of Chemical Engineering and the ⁴Department of Biochemistry and Molecular Biology, Pennsylvania State University, University Park, PA 16802-4400, USA

*To whom correspondence should be addressed. Tel: +86 20 89267515; Fax: +86 20 89235490; Email: xxwang@scsio.ac.cn

Running title: ElaB is a stress-related inner membrane protein

Keywords: C-tail anchored membrane protein, oxidative stress, heat shock, persistence

Table S1. Oligonucleotides used for qRT-PCR, cloning and EMSA probe amplifying. f indicates forward primer and r indicates reverse primer, M indicates mutant. P and MP indicate promoter and mutant promoter, respectively.

Purpose/Name	Sequence (5'-3')
QRT-PCR	
<i>elaB</i> -f	ACGACCTGACGCTGCTTAGT
<i>elaB</i> -r	AGCACGATAAACTGCCTGCT
<i>oxyR</i> -f	TGAGGTGAAAGTCCTTAAAGAGATG
<i>oxyR</i> -r	GTCTGTGCTTCATGCAGATACATT
<i>rrsG</i> -f	TATTGCACAATGGCGCAAG
<i>rrsG</i> -r	ACTTAACAAACCGCCTGCGT
Cloning	
pHGE-f	CACCTCGCTAACGGATTCAACC
pHGE-r	CCAATACGCAAACCGCCTC
pHGE- <i>gfp</i> -f1	GGAATTCATGAGTAAAGGAGAAGAACTTTC
pHGE- <i>gfp</i> -f2	ATGGCTAGCAAAGGAGAAGAACTTTC
pHGE- <i>gfp</i> -r	CGGATCC TTATTTGTAGAGCTCATCCATGCC
pHGE- <i>elaB</i> -f	GGAATTCATGTCTAACAGTTGGTGATACA
pHGE- <i>elaB</i> -r	AAAGTTCTTCTCCTTGCTAGCCATACGGCGTGCCAGCAACAGTCCTAGT
pET28b- <i>rpoS</i> -f	CTAGTCTAGAGTTAACCTTAAGAAGGAGATATAATG
pET28b- <i>rpoS</i> -r	AGTCAGAATACGCTGAAAGTTC CCCAAGCTTTAGTGTAGTGTAGTGTAGTGTAGCTCGCGG AACAGCGCTTCGATATTAGCC
<i>mCherry</i> -f	AAGGAATTGGTGTGGCGCGCCGTTGGCTGGTACTAGGACTGTTGCTGG
<i>mCherry</i> -r	CACGCCGTGTGAGCAAGGGCGAGGAGATAACATG
<i>mCherry</i> -KM-f	GAAGCAGCTCCAGCCTACACTTACTTGTACAGCTCGTCCA
KM-r	TGGACGAGCTGTACAAGTAAGTGTAGGCTGGAGCTGCTTC
<i>gfp</i> -f	GCCTCACATTATACGGGGTACTACAAAAAAATGCAGTACCCGGTGTAA GGGAGGTTCCATATGAATATCCTCCTTAGTTCC
<i>gfp</i> -r	AAGGAATTGGTGTGGCGCGCCGTTGGCTGGTACTAGGACTGTTGCT GGCACGCCGTAGTAAAGGAGAAGAACTTTCACTGGA
conf-f	GGCTCACATTATACGGGGTACTACAAAAAAATGCAGTACCCGGTGTAA GGGAGGTTCCATATGAATATCCTCCTTAGTTCC
conf-r	GGCGAACGAGGCAGTTATC
pHGR01-f	GGAAATCTCTGCGACAAATGG
pHGR01-r	CGTCAATTATTACCTCCACG
pHGR01- <i>PelaB</i> -f	GTGCTGCAAGGCGATTAAG
pHGR01- <i>PelaB</i> -r	CCGGAATTGAGCCGGTCGTTAGGTGGGT
pHGR01- <i>PelaB</i> -r2	CCCAAGCTTGTAAATCATGGTCATTCTCGTTCTCCATTGCG
pHGR01- <i>MPelaB</i> -r2	GGGGGGGGCAAGGGTTGTTGATTACGTTTTTACCTCGCG
pHGR01-	TGCCATCCCAATGTG
	TCTCGTTCTCCATTGCGTAAAACCTGTACGGGGGGGGCAA

MPelaB-r3	GGGTTGTTGATTACG
Probe amplifying	
PelaB-rpoS2-f	TCGGGGCGCAGGCGCATCTG
PelaB-rpoS2-r	TCTCGTTCTCCATTGCGT
PelaB-rpoS1-f	CGGTGTTGTTGTCGAGCAGAATTG
PelaB-rpoS1-r	TTCACTGACAATCACCCGACCTAT

Figure S1. Localization of GFP-ElaB protein. Left panels are phase contrast images and middle panels are fluorescence images. The right panels are the merged images of the first two panels. Cells were induced with 0.5 mM IPTG for 2 h at OD₆₀₀ 1.0. Three independent cultures were used and only one representative figure is shown here.

