

Supplementary materials

Surface display of multiple metal binding domains in *Deinococcus radiodurans* alleviates cadmium and lead toxicity in rice

Liangyan Wang¹, Yudong Wang¹, Shang Dai^{1,*}, Binqiang Wang^{1,2,*}

1 Institute of Biophysics, College of Life Sciences, Zhejiang University, Hangzhou, 310029, China.

2 State Key Laboratory of Clean Energy Utilization, Zhejiang University, Hangzhou, 310029, China.

* Correspondence: wangbinqiang@zju.edu.cn; daishang@zju.edu.cn

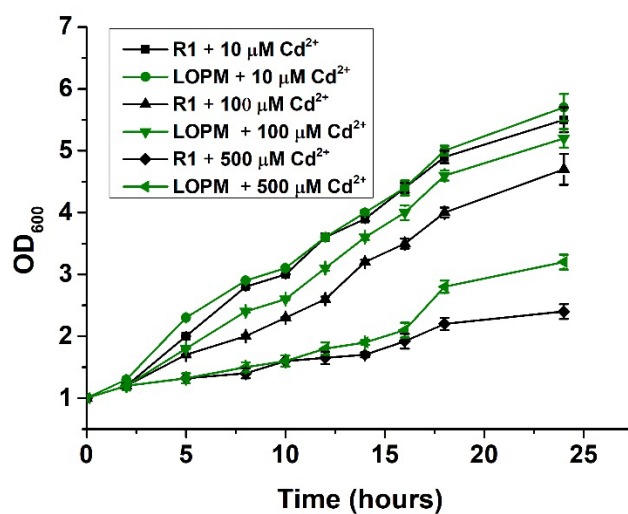


Figure S1. Effect of Cd on the growth of *D. radiodurans* wild-type R1 and recombinant strains LOPM. Growth curves of bacteria under the treatments of different concentration of Cd.

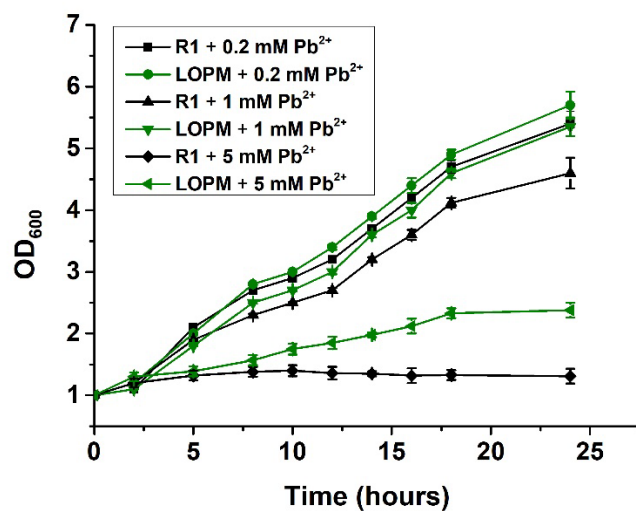


Figure S2. Effect of Pb on the growth of *D. radiodurans* wild-type R1 and recombinant strains LOPM. Growth curves of bacteria under the treatments of different concentration of Pb.

Table S1. Strains and plasmids used in this study.

Strains or plasmids	Description	Source
Strains		
<i>D. radiodurans</i> R1	ATCC 13939	Lab stock
<i>D. radiodurans</i> LOPM	<i>D. radiodurans</i> R1 inserted with plasmid pRAD-P8-LPP-OmpA-PbBD-MTT5	This study
<i>Escherichia coli</i>	Strain K12	Lab stock
<i>Cupriavidus metallidurans</i>	DSM 2839	Lab stock
Plasmid		
pRAD	pRADZ3 derivative in which lacZ is replaced with the kanamycin gene (AprKmrCmr)	Lab stock

Table S2. Primers used in this study.

Primer	Sequence (5'- 3')
<i>Protein expression</i>	
LPP-OmpA-F	gattatcactattctgATGAAAGCCACCAAAGTGGT
LPP-OmpA-R	gctgcgcgcgcACGCGTTGCAATTTCCGG
PbBD-F	ggcggcggcggcagcCAGTTCATTCGTCACCTGCCGG
PbBD-R	gctgccgcgcgcgcgcgcgcgcGCACAGTCCCTGCAGA ATCC
MTT5-F	ggcggcggcggcagcggcggcggcggcagcGATAAAAATTTCTGG TGAAAGCACT
MTT5-R	cctgcaggtcgaatcggatccTCAGCAACTACCTCCAGG

All lowercase letters are flexible linkers and homology arms sequences that connect the upstream and downstream fragments.