1 **Supplementary material**

2 **Qualitative and quantitative assessment of genotoxins**

3 **using *SRRz* lysis reporter under the control of a new**

4 **designed SOS responsive promoter in *Escherichia coli***

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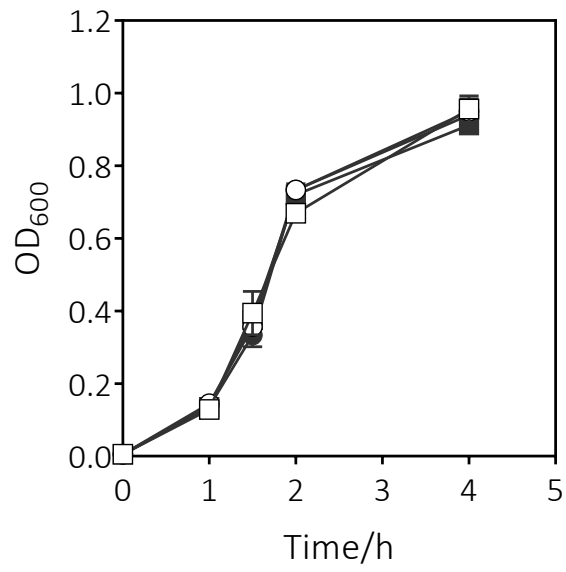10 [b] *School of Environment and Energy, South China University of Technology, Higher*

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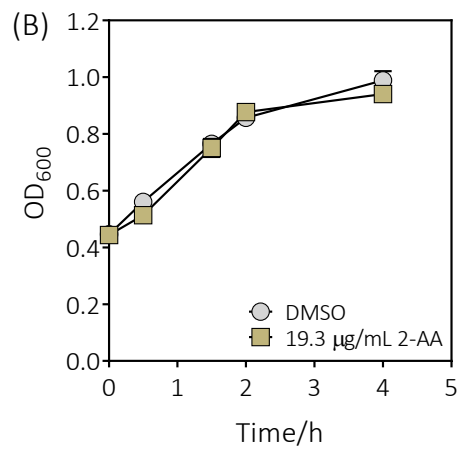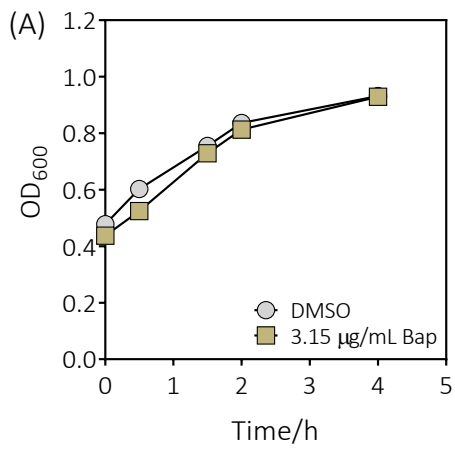13 *Provincial Key Laboratory of Microbial Culture Collection and Application,*

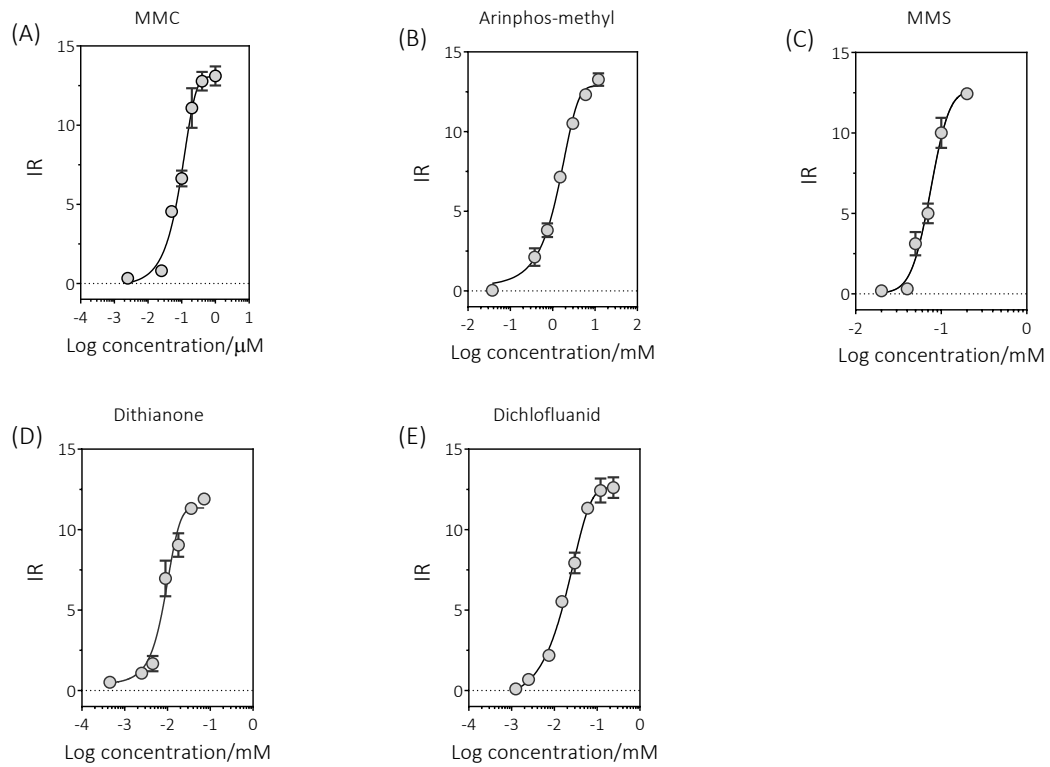14 *Guangdong Institute of Microbiology, Guangzhou 510070, China*

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Fig. S1 Growth curves of *E. coli* strains of BL21/pUC18 (circle), BL21/pUC18-PST

(square). Solid symbols indicate that no DMSO was added, while hollow ones indicate

that DMSO was added.

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21 **Fig. S2** Effects of 31.5 μg/mL BaP (A) and 19.3 μg/mL 2-AA (B) on the cell growth

22 of *E. coli* BL21/pUC18-PST.

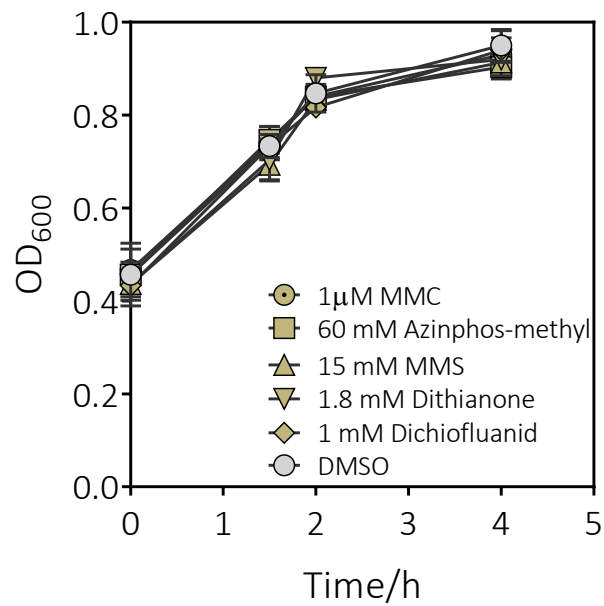23

Fig. S3 Semi-logarithm concentration-induction ratio curves of *E. coli* BL21/pUC18-

PST contact with MMC (A), arinphos-methyl (B), MMS (C), dithianone (D) and

dichlofluanid (E).

29 **Fig. S4** Effects of 1 μM MMC, 60 mM azinphos-methyl, 15 mM MMS, 1.8 mM

30 dithianone and 1 mM dichiofluanid and DMSO on *E. coli* BL21/pUC-18 cell growth,

31 respectively. When the OD_{600} reached about 0.4, different chemicals were added to the

32 cell culture, and the time at this time was recorded as zero point. The cell densities

33 (OD_{600})   were   measured   over   time.

34 **Table S1** Chemicals concentration in mixture experiments (μM)

Experiment	MMC	Azinphos-methyl	MMS	Dithianone	Dichlofluanid
1			44.2	5.6	
2		728.3		5.6	
3				5.6	11.9
4	0.0486			5.6	
5		728.3	44.2		
6			44.2		11.9
7	0.0486		44.2		
8		728.3			11.9
9	0.0486	728.3			
10	0.0486				11.9
11		728.3	44.2	5.6	
12			44.2	5.6	11.9
13	0.0486		44.2	5.6	
14		728.3		5.6	11.9
15	0.0486	728.3		5.6	
16	0.0486			5.6	11.9
17		728.3	44.2		11.9
18	0.0486	728.3	44.2		
19	0.0486		44.2		11.9
20	0.0486	728.3			11.9

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