

# Development of a Plasmid-Based System for Studying DNA Repair Mechanisms in *Escherichia coli*

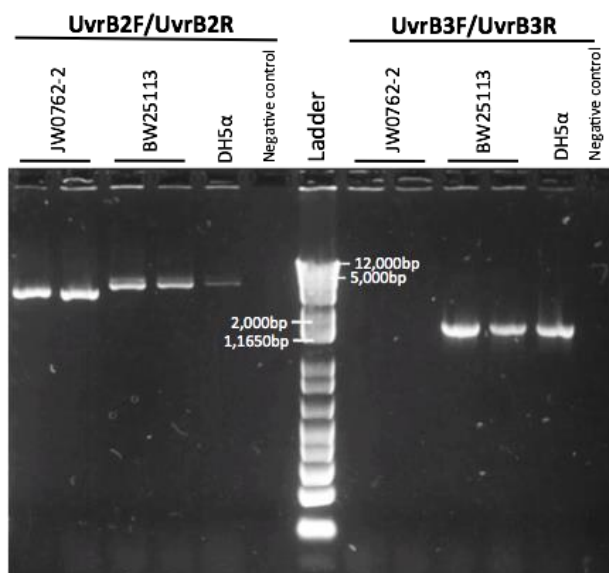
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## SUPPLEMENTAL MATERIAL

### SUPPLEMENTARY METHODS

**PCR and DNA agarose gel electrophoresis.** The *uvrB* gene is PCR-amplified from the genomic DNA from BW25113 and JW0762-2 strains with two sets of primers (Table S1). PCR products were run on a 1.5% agarose gel at 120 volts (V) for 1 hour (hr) (Figure S1.).

### SUPPLEMENTARY FIGURES AND TABLES



**FIG. S1 Electrophoresis of PCR products.** Primer sets (UvrB2F/UvrB2R and UvrB3F/UvrB3R) as described in Table S1 were used. PCR products from *E. coli* strain DH5α was used as a positive control. Negative control contains no inoculum. 1kb Plus DNA Ladder was used.

**Table S1. Primer design used in this study for the confirmation of *E. coli* strains.** Primer set UvrB2F and UvrB2R amplify *uvrB* by targeting regions further upstream and downstream of *uvrB*. Primer set UvrB3F and UvrB3R amplify target region within *uvrB*

| Strain   | Designation      | Description   | Source                   |
|----------|------------------|---|--------------------------|
| BW25113  | WT               | $\Delta(araD-araB)567, \Delta lacZ4787(::rrnB-3), \lambda^-, rph-1, \Delta(rhaD-rhaB)568, hsdR514$                      | Keio Knockout Collection |
| JW0762-2 | $\Delta uvrB$    | $\Delta(araD-araB)567, \Delta lacZ4787(::rrnB-3), \lambda^-, \Delta uvrB751::kan, rph-1, \Delta(rhaD-rhaB)568, hsdR514$ | Keio Knockout Collection |
| DH5α     | Positive control | <i>lacZAM15</i>   | MICB 421 Collection      |

**TABLE S2 Summary of *E. coli* strains used in this study**

| Description   | Sequence (5'-3')     | T <sub>m</sub> (°C) | %GC |
|---------------|----------------------|---------------------|-----|
| <b>UvrB2F</b> | TTTACGCCGCTTTCTGACAC | 55.8                | 50  |
| <b>UvrB2R</b> | ACGCCTAATGTACCCGCAAC | 57.8                | 55  |
| <b>UvrB3F</b> | TTACTTGGCGTGACTGGCTC | 57.5                | 55  |
| <b>UvrB3R</b> | GACCTTCGCGCAGTAAGTTG | 56.4                | 55  |