Figure S1. Expression of selected SOS genes in *recA730* strains as measured by Quantitative Reverse-Transcription PCR. Expression of the SOS-regulated *yebG*, *recN*, and *recA* genes was measured. The *proC* gene was used as a SOS-independent control. All mRNA levels were normalized relative to the *proC* level, and the level for the single *recA730* strain was set at 1.0. Measurements were performed in triplicate, and error bars represent the standard deviation. Overnight cultures were diluted 1:100 in LB and grown at 37°C with shaking to OD_{600} = 0.5. RNA was isolated using the RNeasy Mini kit (Qiagen). cDNA was synthesized by reverse transcription of the isolated RNA using SuperScript® VILO™ Master Mix (Invitrogen) and used for quantitative PCR performed according to the manufacturer's instructions, using LightCycler® 480 SYBR Green I Master mix (Roche) and a LightCycler® 480 Instrument (Roche). Primers used were 5′-CATTCTCGGCGGTCTGATTG-3′ and 5′-CTTCTTGCGCCGATTCTGC-3′ for *proC*, 5-GAAGCCGATGCTTATGAC-3′ and 5′-CTCAGCACATCTTTTTGTTC-3′ for *yebG*, 5′-CGTACTTGATATGCTGGAAG-3′ and 5′-GTTTTGAGATGCGCTGTT-3′ for *recN*, and 5′-TAACCCGGAAACCACTAC-3′ and 5′-TTTTGTTCTTCACCACTTTC-3′ for *recA*. Strains used were EC9477 (*recA730*), EC9471 (*recA730 dcd*), EC9503 (*recA730 ndk*), EC9685 (*recA730 lexA51*), EC9686 (*recA730 dcd lexA51*), and EC9687 (*recA730 ndk lexA51*) (see main text, Table 1).
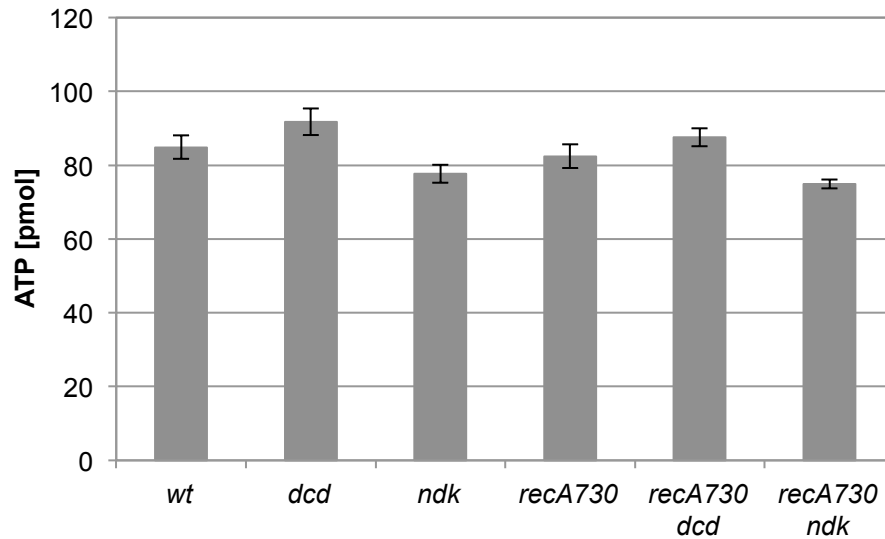
Figure S2. ATP levels in various *E. coli* strains measured using BacTiter-Glo™ assay. The BacTiter-Glo™ Assay (Promega) was performed according to the manufacturer's instructions in a 96-well format. Overnight LB cultures were diluted 1:2,000 in fresh LB medium and grown at 37°C with shaking to OD_{600} = 0.4. Luminescence was recorded using a Synergy 2 Multi-Mode Microplate Reader with a 1-second integration time. Measurements were performed in triplicate, and error bars represent the standard deviation. Strains used were EC9428 (wt), EC9461 (*dcd*), EC9487 (*ndk*), EC9477 (*recA730*), EC9471 (*recA730 dcd*), and EC9503 (*recA730 ndk*) (see main text, Table 1).