DNA Gyrase of *Deinococcus radiodurans* is characterized as Type II bacterial topoisomerase and its activity is differentially regulated by PprA *in vitro*.

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**Fig. S1.** *E. coli* gyrase activity assay. Supercoiled (**a**) and relaxed (**b**) DNA substrates were incubated with 0.5 U, 1.0 U, 2.0 U and 4.0 U of *E. coli* gyrase (EcGyr) for 30 min. Products were analyzed on agarose gel and DNA bands were visualized with ethidium bromide. (**c**) For checking decatenation activity of *E. coli* gyrase, kDNA (S) was incubated with 5.0 U (5) and 10.0 U (10) of enzyme and products were analysed on agarose gel along with nicked and relaxed monomer marker (M1) and linear kDNA marker (M2).

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Fig S2. Multiple sequence alignment of amino acids of PprA homologues from different species of *Deinococcus*. Lysine 133 is part of "LKV" motif located between 16-170 on scale while tryptophane 183 is part of "DAAWD" motif located between 210-220 scale and respective residues are marked with arrows (Blue).