SUPPORTING INFORMATION

Base and Nucleotide Excision Repair Pathways in DNA Plasmids Harboring Oxidatively Generated Guanine Lesions

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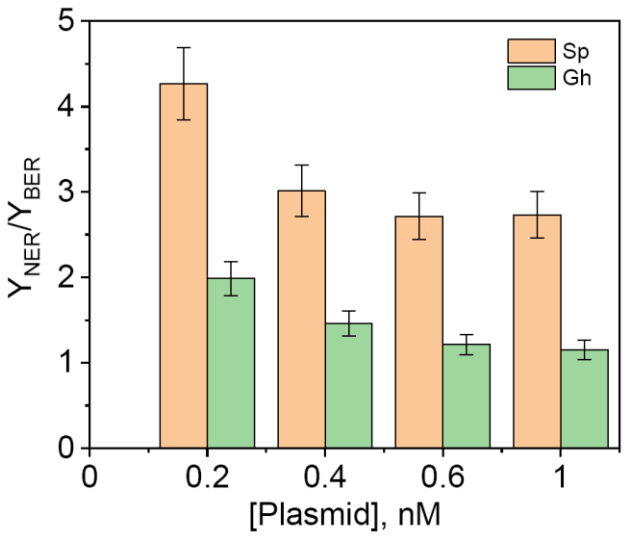

Figure S1. Ratios of the yields of BER and NER incision products (Y_{NER}/Y_{BER}) from the ^{32}P-internally labeled covalently closed circular plasmids harboring *S*-Sp, and Gh lesions as a function of the substrate concentration in the same HeLa cell extract. The results of three independent experiments and their standard deviations are shown.

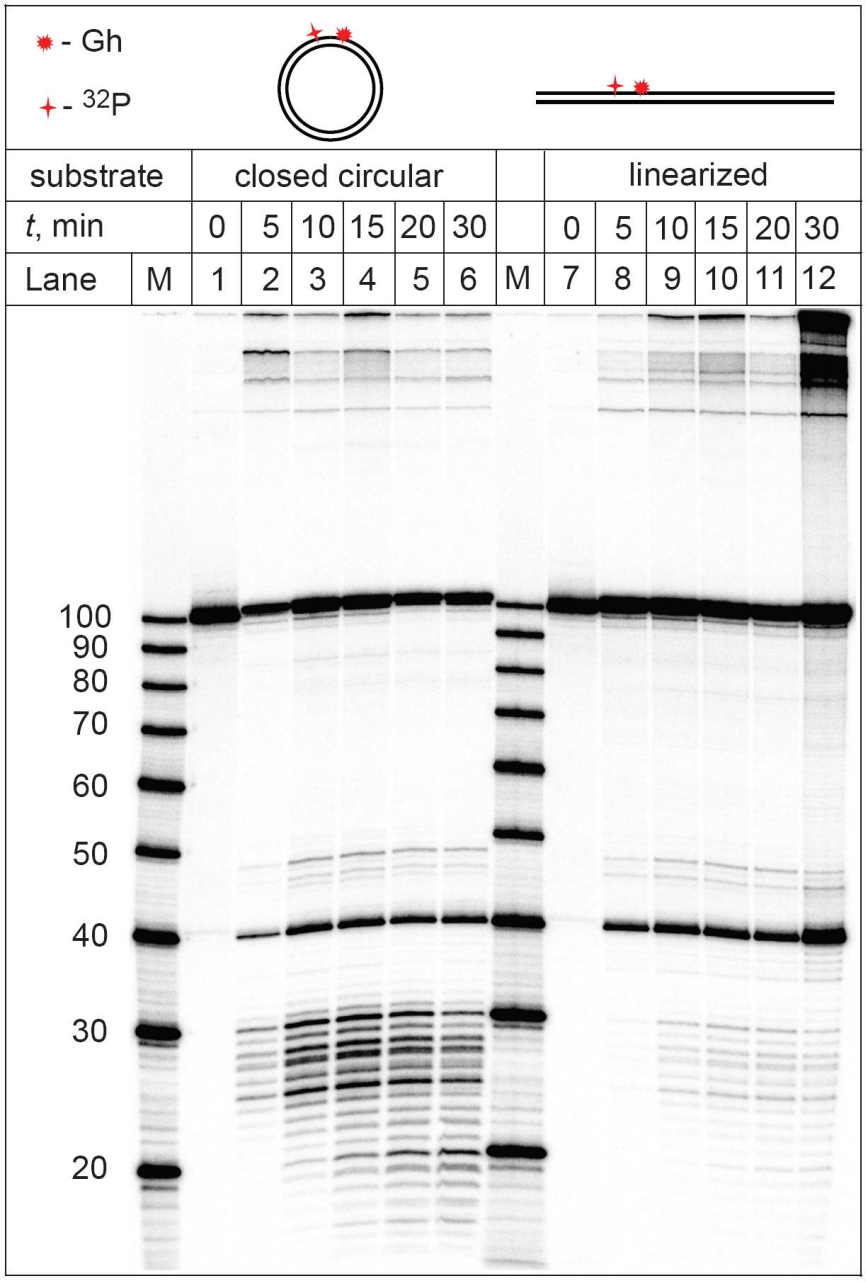

Figure S2. BER and NER incisions of the ^{32}P-internally labeled covalently closed circular and linearized plasmids containing the same molar concentrations of DNA molecules bearing single Gh lesions (0.2 nM) as a function of incubation time in the same HeLa cell extracts (lanes labelled 0, 5, 10, 15, 20, 30 min). Lanes M: oligonucleotide size markers.

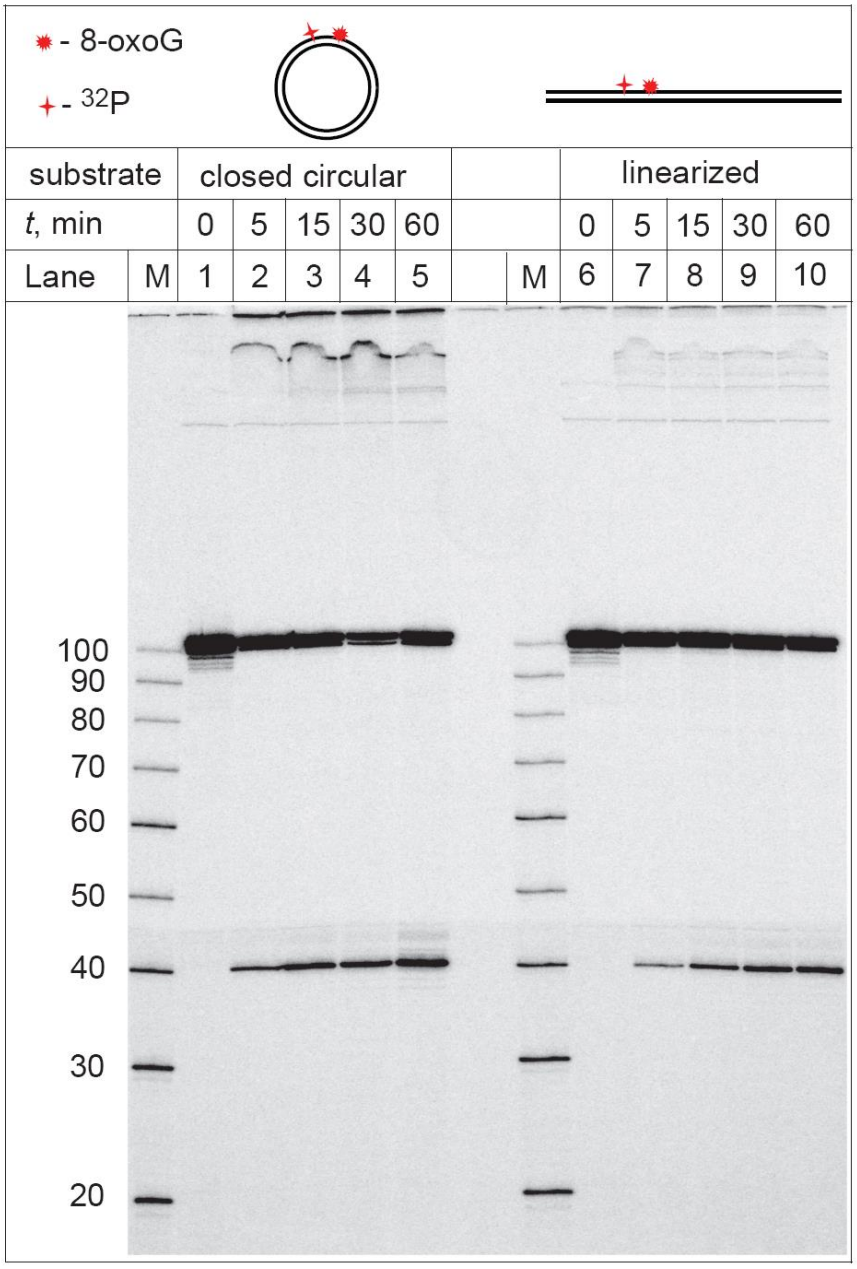

Figure S3. BER incisions of the ^{32}P-internally labeled covalently closed circular and linearized plasmids containing the same molar concentrations of DNA molecules bearing single 8-oxoG lesions (0.2 nM) as a function of incubation time in the same HeLa cell extracts (lanes labelled 0, 5, 15, 30, 60 min). Lanes M: oligonucleotide size markers.

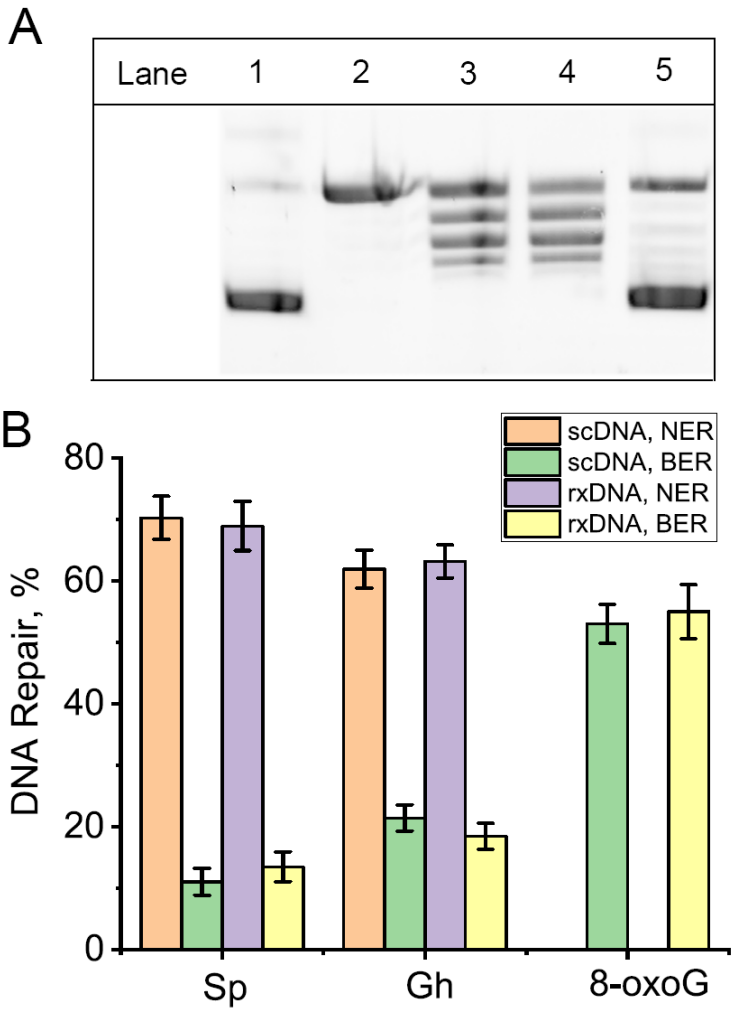

Figure S4. (A) Representative 1% agarose gels of the plasmids after staining with ethidium bromide. Lanes: 1 – control supercoiled pUC19NN plasmid, 2 – nicked pUC19NN generated by tandem nicking of pUC19NN with the Nt. BbvCI restriction enzyme, 3 – relaxed forms of Sp-modified pUC19NN generated by ligation of the nicked plasmid, 4 – relaxed forms (lane 3) treated by T5 endonuclease to remove products of incomplete ligation, 5 – supercoiled form of Sp-modified pUC19NN generated by treatment of the relaxed forms (lane 4) with *E. coli* DNA gyrase. (B) The yields of BER and NER incision products of single *S*-Sp, Gh and 8-oxoG lesions positioned at the same sites in ^{32}P-internally labeled supercoiled and relaxed closed circular plasmids incubated in HeLa cell extract. The results of three independent experiments and their standard deviations are shown.