

## Electronic Supplementary Information

### 8-Oxo-7,8-dihydro-2'-deoxyguanosine and abasic site tandem lesions are oxidation prone yielding hydantoin products that strongly destabilize duplex DNA

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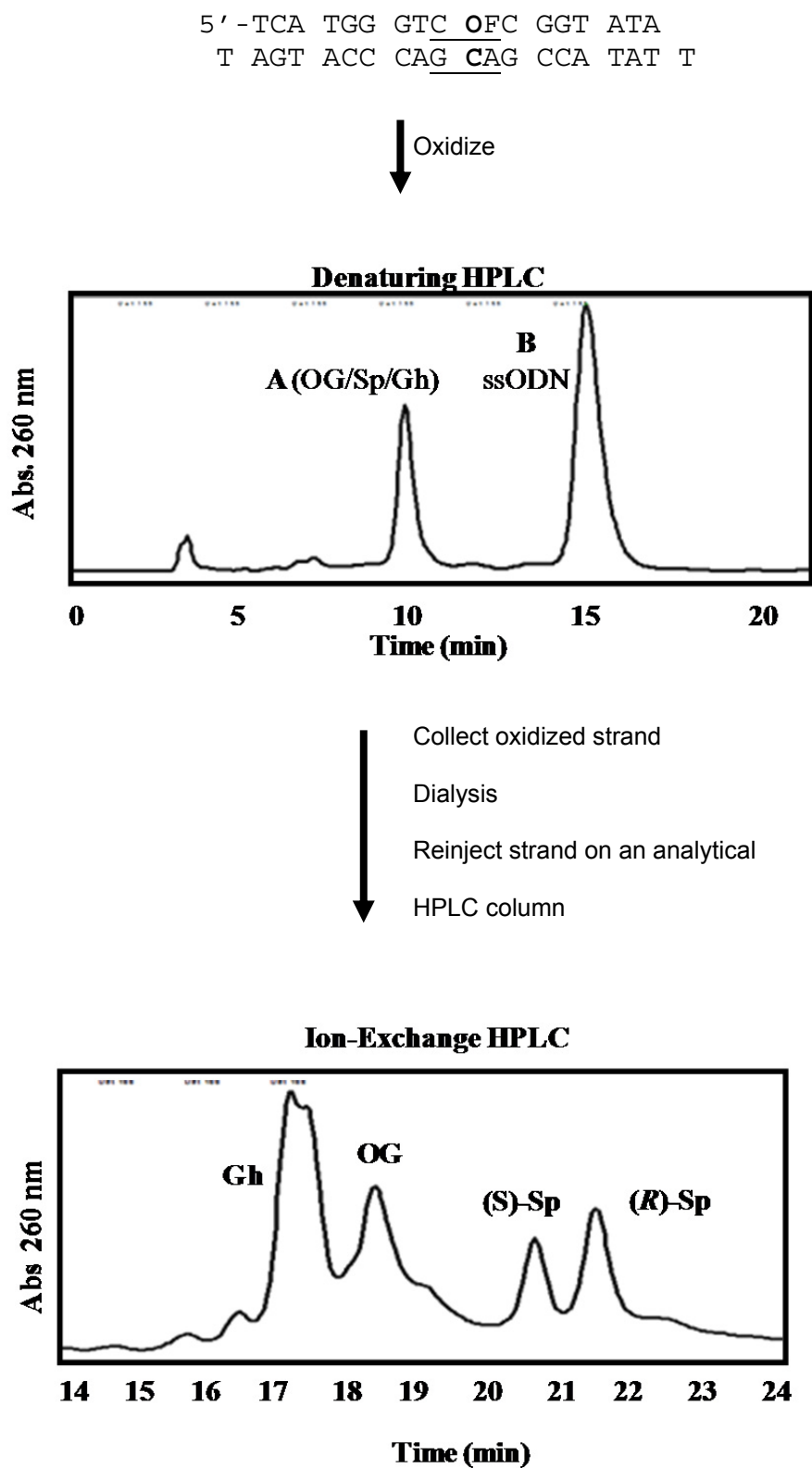
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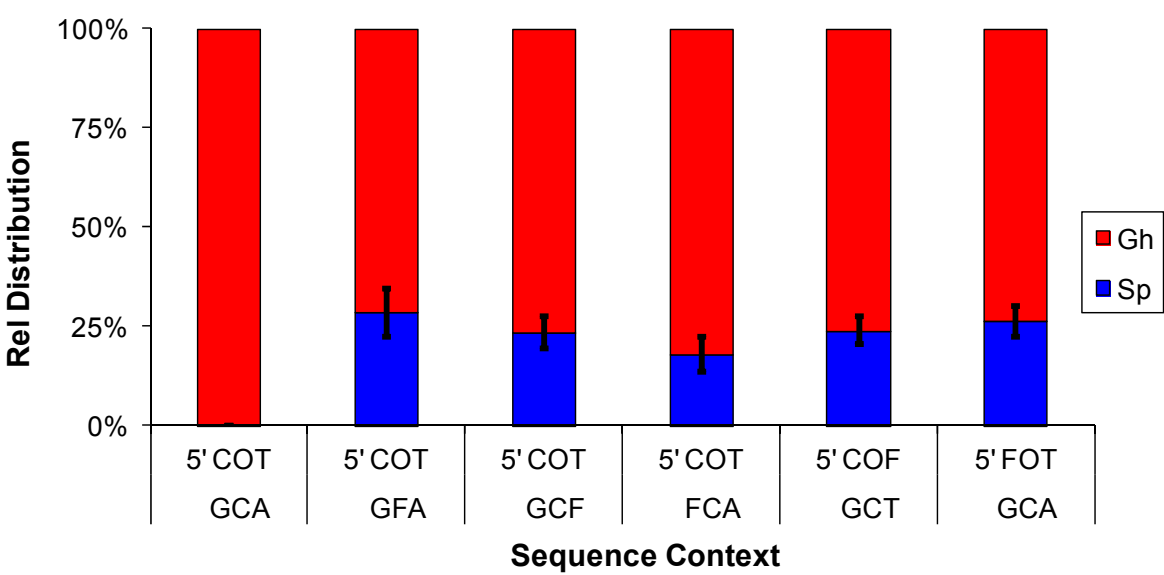
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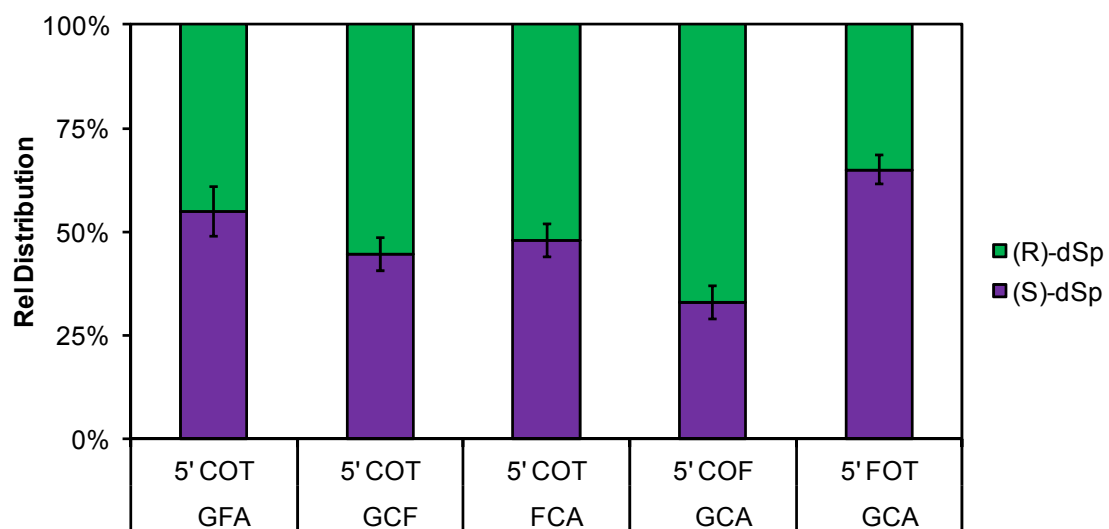
**Figure 1.** Method to determine dOG oxidation products in dsODNs



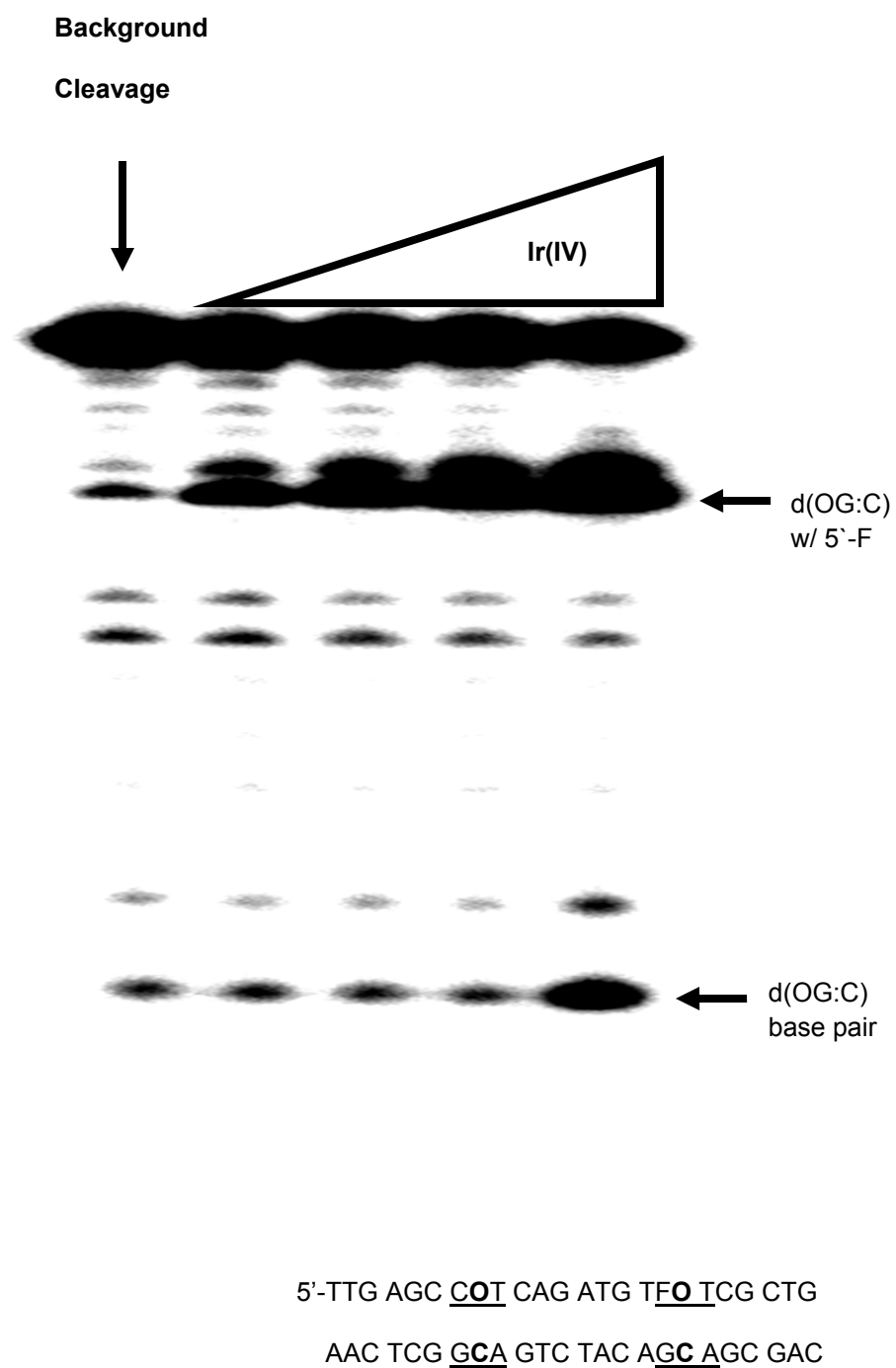
**Figure 2.** Products observed with F in the complementary strand to dOG (O)



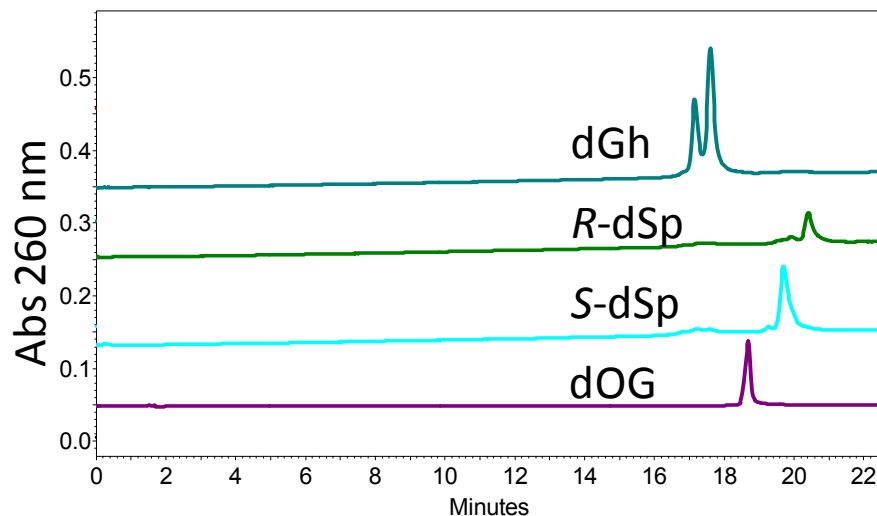
**Figure 3.** Ratios of the dSp diastereomers with F in the complementary strand to dOG (O)



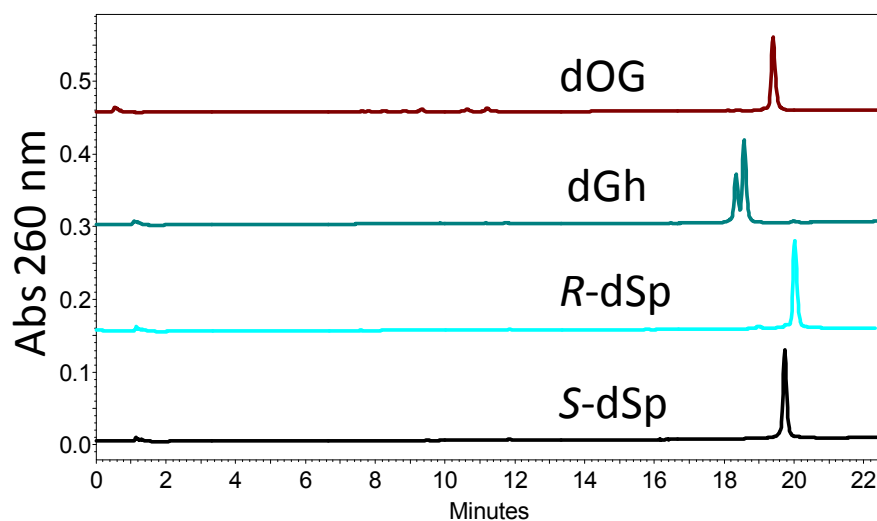
**Figure 4.** Method to measure the context dependency in the relative reactivity of dOG (O)



**Figure 5.** Example HPLC traces showing purity of a ssODN with dOG, dGh, or the dSp isomers



The traces are for the sequence 5'- TC ATG GGT FXT CGG TAT A-3' where X = dOG, dGh, (S)-dSp, or (R)-dSp.



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