Figure S7. **Structure analysis of the impact of telomeric 8-oxoG on Rap1 binding.**

(A and B) Specific interactions between guanines and the two HtH motifs of Rap1p (Protein Data Bank: 1IGN). The helices of HtH motifs are shown as yellow cylinders and, the side chains interacting with DNA are shown as color-coded sticks (carbon in yellow, nitrogen in blue, and oxygen in red). DNA is shown as cartoon except for the guanines, which are shown as green-carton sticks. Hydrogen bonds are represented by magenta dashed lines, and van der Waals contact by yellow dashed lines. (C) Chemical structures of guanine and 8-oxo-G. A 3D structure of 8-oxo-G in cyan (Protein Data Bank: 2ASL) is shown to highlight the structural changes. The yellow double arrow shows the close contact, which may be relieved by distorting the phosphate backbone. (D) 8-oxo-G’s (shown in cyan) are modeled to replace guanines that interact with one HtH motif (the same as in B). Clashes between protein and the oxidized DNA are shown as red dashed lines. Similar clashes would occur with the HtH motif shown in A.