

Figure S1 Analysis of the reaction between AGT (500 nM) and 10 nM 3(O<sup>6</sup>pobG). The reactions were unenched at various times (0, 0.17, 0.5, 1, 2, 4, 8, 14, and 22 min) with NaOH and 3(O<sup>6</sup>pobG) was separated from 3(G) with ion-exchange HPLC. The sequential chromatograms show the conversion of 3(O<sup>6</sup>pobG) to 3(G).

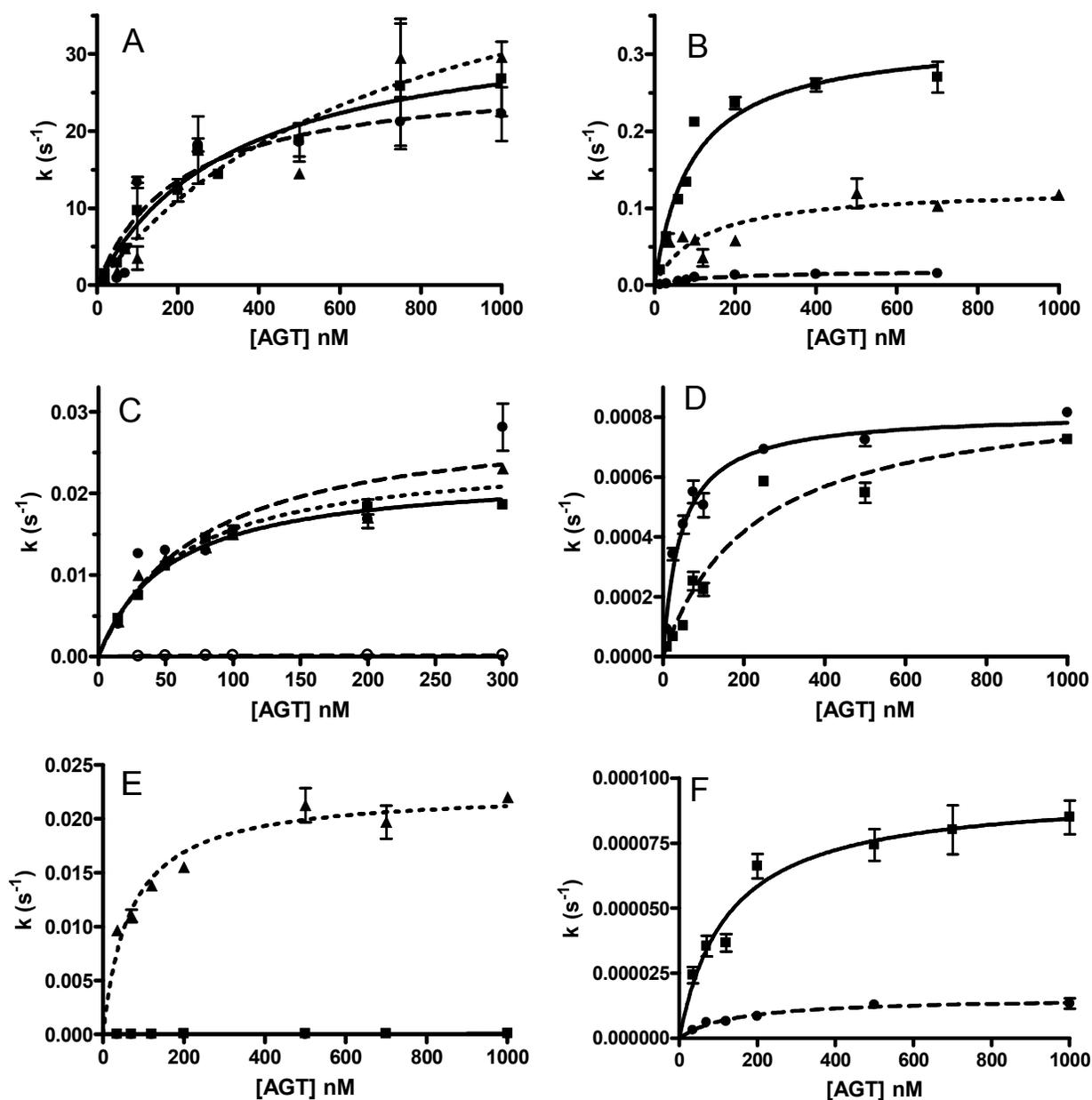


Figure S2. Reaction of  $O^6$ -alkylguanines in DNA with different concentrations of AGT. First-order rate constants of the reaction of 20 to 1000 nM AGT with 10 nM oligodeoxynucleotides with sequences **1** (■, solid line), **2** (●-fast phase, ○-slow phase, dashed line), and **3** (▲, dotted line). The panels represent different alkyl groups with A,  $O^6\text{bzG}$ ; B,  $O^6\text{mG}$ ; C,  $O^6\text{eG}$ ; D,  $O^6\text{heG}$ ; and E and F,  $O^6\text{pobG}$ . The solid lines are the best fit of the data were fitted to equation 3. The error bars are the standard errors from the data analysis from Figure 1.