Supplementary Data

Figure S1
Figure S2
Legends for Supplementary Figures

Supplementary Figure 1. $^1$H-$^{15}$N HSQC spectra (red) of A3A mutants E72Q, Y130F, and D131E are superimposed onto that of WT (blue), showing that these mutants maintain the WT structural fold. All of the proteins for NMR analysis were prepared using the same buffer (25 mM sodium phosphate buffer, pH 6.9, 10 mM DTT). The spectra were acquired at 25 °C, either on 800 (WT, Y130F and D131E) or 600 (E72Q) MHz spectrometers.

Supplementary Figure 2. EMSA of 40-nt dsDNA, 40-nt DNA-RNA duplex and 40-nt ds RNA binding by WT A3A. 40-nt dsDNA and 40-nt DNA-RNA duplexes were generated by annealing 40-nt TTCA-containing ssDNA (JL895) with complementary DNA (JL984) and RNA (JL970) oligonucleotides, respectively. The 40 nt dsRNA duplex was formed by annealing the RNA version of JL895 (JL1045) with a complementary RNA (JL970). In each case, the ratio of labeled:unlabeled oligonucleotide was 1:1.2. The oligonucleotide sequences are given in Table 1.