Supplementary Figure S1. Superposition of the oligonucleotides bound to the PA_N endonuclease. In all figures, only those nucleotides that occupy the **P-1**, **P0**, **P1** and **P2** sites in the four complexes are shown. (A) The four superimposed sugar-phosphate backbones. (B-D) The RNA oligomer AG*CA (where * indicates the location of the uncleavable sulfate linkage and the underlined nucleotides are those that occupy the four sites) superimposed on (B) DNA oligomer TAGCAT, (C) DNA oligomer TAGC and (D) DNA oligomer TGAGC. In (B-D), the common structure is the RNA complex as shown in Figure 1A. In (C) and (D), only three DNA nucleotides are shown because the **P-1** site is empty in both; it is missing in the 'cleaved' complex (C) or is part of the partially dissociated 5' dinucleotide in the 'product' structure (D). This also explains why the **P-1** site in (A) only contains two superimposed ribose-phosphate moieties. RNA is colored with orange carbons, DNA is colored with magenta carbon bonds, and PA_N and key residues are colored cyan (as in Figure 1A). The key residues are labeled in (B). Note that the RNA and DNA sugar-phosphate backbones align well within their pockets, but the orientations of the bases are more variable.