

**Figure S1.** Triphosphorylation kinetics of ribozymes constraucts with successive truncations in the P5 helix. The same data are displayed in figures 3C, D in different format. **(A)** Triphosphorylation kinetics of the ribozyme with fragmented loop L5 and full-length P5 helix (filled circles), seven (triangles), six (empty squares), and five base pairs in the P5 helix (empty circles). **(B)** Triphosphorylation kinetics of the ribozyme with four (filled circles), three (filled triangles), two (filled squares), one (empty triangles), and zero base pairs in the P5 helix (empty circles). Error bars are standard deviations from 3-4 experiments. Grey curves are single-exponential least-squares fits to the individual data sets.