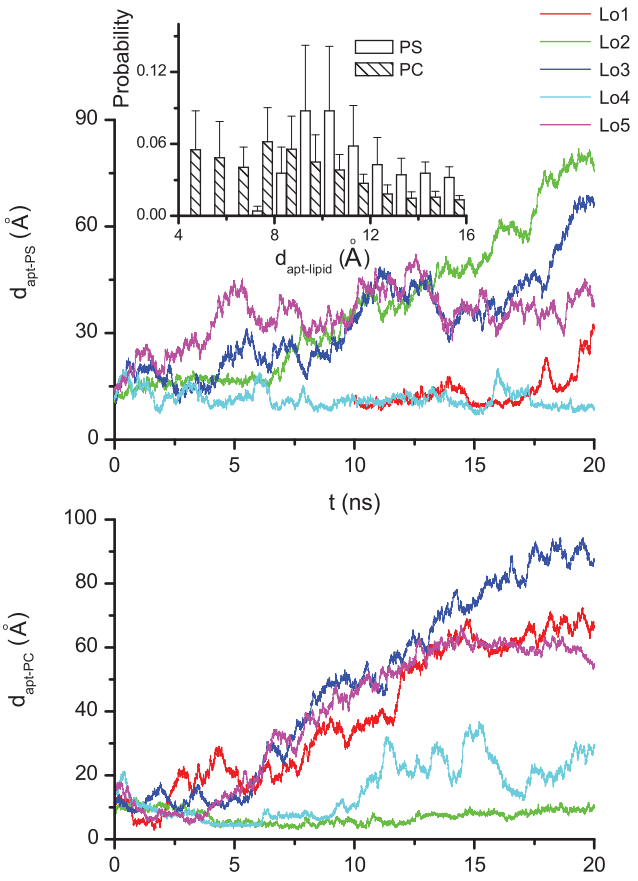

SUPPLEMENTARY FIG. S2. Twenty-nanosecond (ns) molecular dynamic simulations for SIAp4 case. Plots of 20-ns molecular dynamics results for both the SIAp4-PS (*upper panel*) and the SIAp4-PC (*lower panel*) complexes in terms of $d_{\text{apt-lipid}}$ versus simulation time. The probabilities of designed aptamers away from PS and PC at a specific separation distance are shown in the *inset*. For the sake of clarity of presentation by avoiding overlap between two different types, two histograms (one for PS and one for PC) have been presented, where each has occupied 1 Å.