## **Supporting Information**

Niles et al. 10.1073/pnas.0906370106

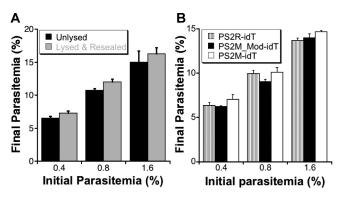


Fig. S1. (A) Parasites infect and grow equally well in sham-loaded (lysed and resealed using the HL/R procedure) as intact erythrocytes. (B) Excluding RBC bound aptamer as an explanation for aptamer induced toxicity. Erythrocytes were incubated in isotonic buffer (no lysis) under conditions simulating loading with 300  $\mu$ M PS2R-idT, PS2M\_Mod-idT and PS2M-idT, washed exactly according to the post resealing step of the HL/R protocol and used in parasite growth assays.

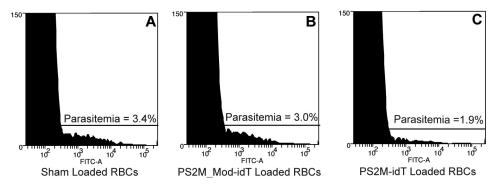


Fig. S2. Several representative FACS histograms used to determine parasite growth in experiments with: (A) Sham-loaded RBCs; (B) control oligonucleotide  $PS2M\_Mod\_idT$  (300  $\mu$ M) preloaded RBCs; and (C) heme-binding aptamer PS2M-idT (300  $\mu$ M)-preloaded RBCs.