Supporting Information

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SI Text

RNA-Binding Assays. The 5′-end-labeled EGSs (10 pmol/1 μM) were incubated 2 h at 25 °C in 10 μL STE buffer with 0, 5, 10, 50, or 100 pmol/0, 0.5, 1, 5, or 10 μM *aac(6′)-Ib* mRNA and analyzed on a 5% native GTG-PAGE as described in Sarno R, et al. (2003) Inhibition of aminoglycoside 6′-*N*-acetyltransferase type Ib-mediated amikacin resistance by antisense oligodeoxynucleotides. *Antimicrob Agents Chemother* 47:3296–3304.

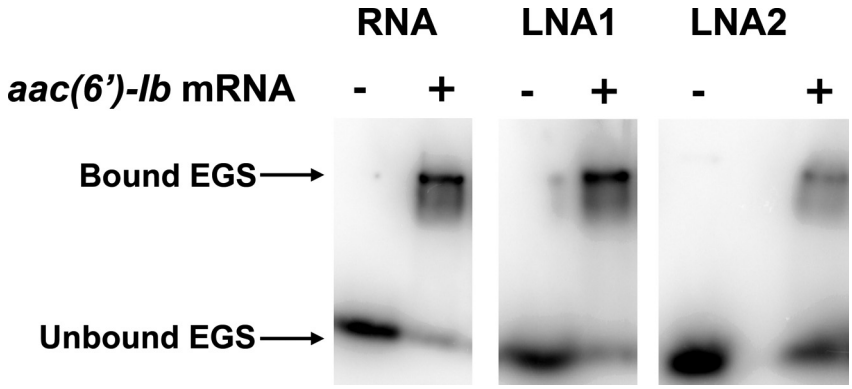

Fig. S1. Binding of unsubstituted EGSC3 (RNA), LNA1, and LNA2 to *aac (6)-Ib* mRNA. The 5′-end-labeled EGSs and *aac (6)-Ib* mRNA were incubated as described in *SI Text* and analyzed in native polyacrylamide gel electrophoresis.

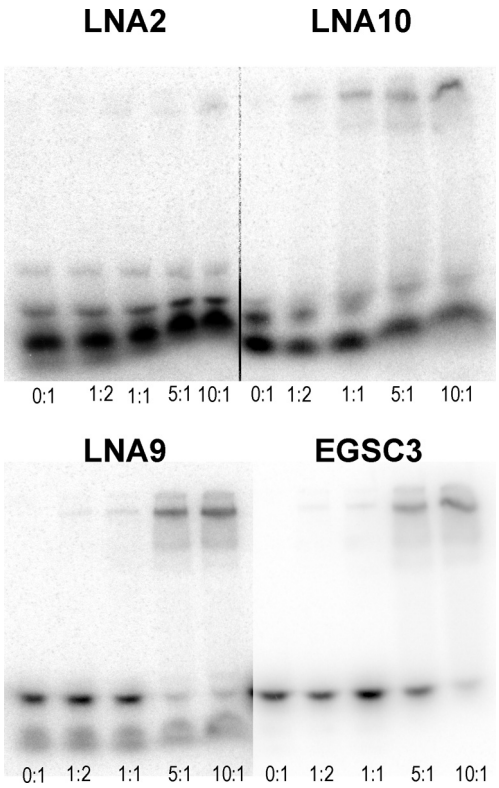

Fig. S2. Binding of EGSC3, LNA2, LNA9, and LNA10 to *aac (6)-Ib* mRNA. The 5′-end-labeled EGSs and *aac (6)-Ib* mRNA were incubated at the EGS:mRNA ratios indicated in the figure as described in *SI Text* and then analyzed in native polyacrylamide gel electrophoresis.

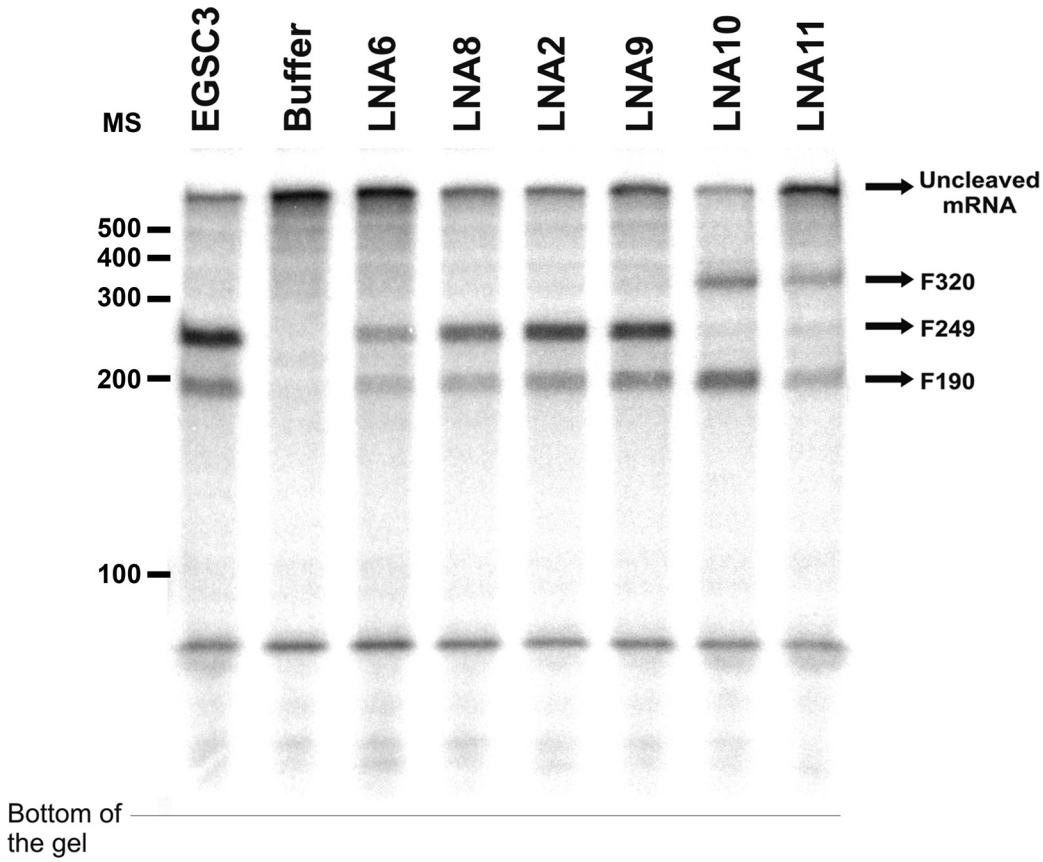

Fig. S3. Activities of LNA/DNA co-oligomer EGSs. The gel is identical to that shown in Fig. 2*B* but the electrophoresis was carried out for only 20 min to allow all molecular weight products to stay inside the gel. The band at *ca.* 90 nucleotides is present in all radioactively labeled mRNA samples.

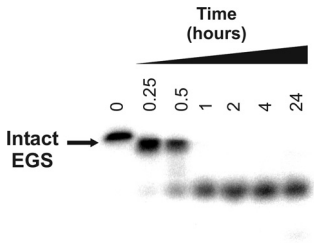

Fig. S4. Time course of EGSC3 decay upon exposure to bacterial lysates. ^{32}P-labeled EGSC3 was incubated in the presence of cell extracts obtained by soft sonication for the indicated times and analyzed by 15% PAGE.

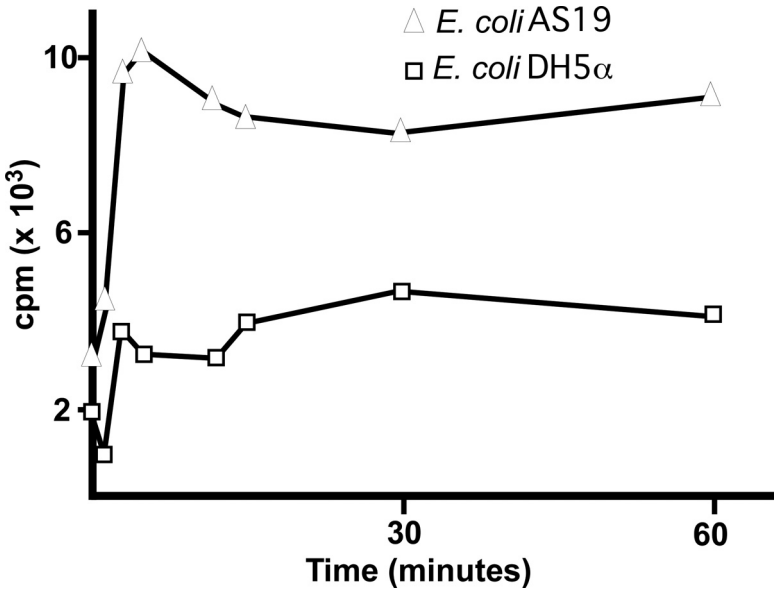

Fig. S5. Accumulation of [^{32}P] LNA9 in *E. coli DH5α* (open squares) or *E. coli AS19* (open triangles). Exponentially grown cells (OD_{600} 0.6) were washed twice with ice-cold modified Tanaka buffer. Cells were incubated in the presence of 50 μM of [^{32}P] LNA9. Aliquots were taken at different time points and filtered through Millipore 0.45-μM filters. Filters were washed twice with 1 mL cold PBS buffer and radioactivity was measured with a liquid scintillation counter.

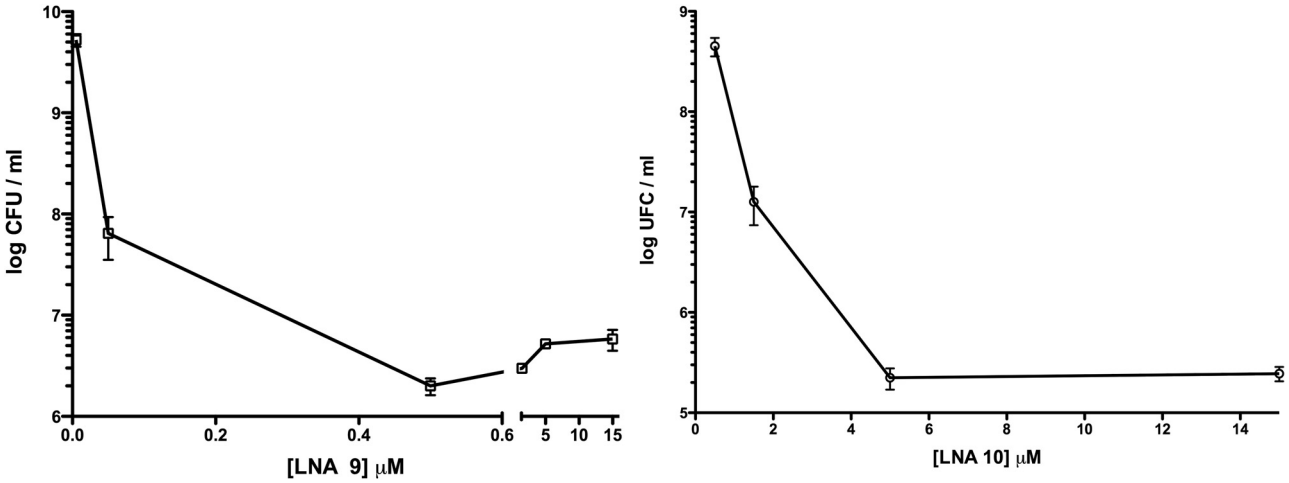

Fig. S6. Colony forming units of *E. coli* AS19(pFC9) exposed to Ak after pretreatment with different concentrations of LNA9 or LNA10. Results are expressed as log of mean± SD of colony forming units per milliliter (log CFU/mL).