

Supplementary Information

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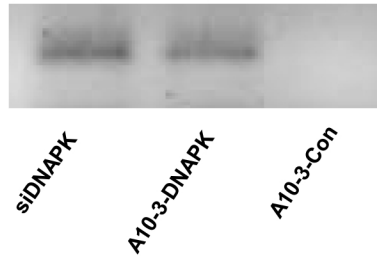
Name	Chemically Synthesized RNA
A10-3 (2'Fluoro-pyrimidine)	GGGAGGACGAUGC GGAUCAGCCAUGUUUACGUCACU CCUUGUCAAUCCUCAUCGGC
Neg aptamer (2'Fluoro-pyrimidine)	CAGGCAUGCCUAGCUAAGCAGCCCAUGGAUUAUGCGC GGAUAUUGGCUUCCGUUC
DNAPK (anti sense)	UAAACUGGCGAGUUAGCCGAAUU
DNAPK (sense)-link A10-3	UUCGGCUAACUCGCCAGUUUAGCCGAUGAGGAUU
DNAPK (sense)-link Neg	UUCGGCUAACUCGCCAGUUUAGAACGGAAGCCAA
Con siRNA (anti sense)	ACGUGACACGUUCGGAGAAUUUU
Con siRNA (sense)-link A10-3	AAUUCUCCGAACGUGUCACGUGCCGAUGAGGAUU
Con siRNA (sense)-link Neg	AAUUCUCCGAACGUGUCACGUGAACGGAAGCCAA

Supplementary Table S1. Sequence of Chemically Synthesized Aptamers and RNA

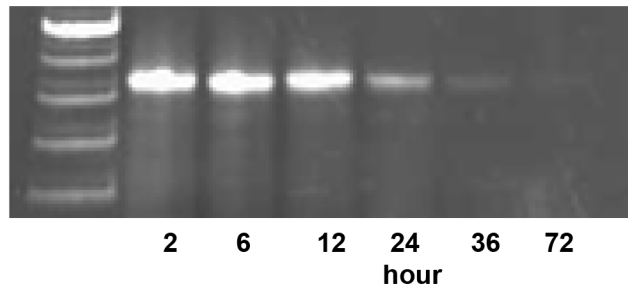
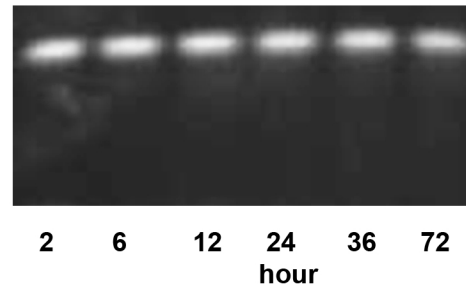
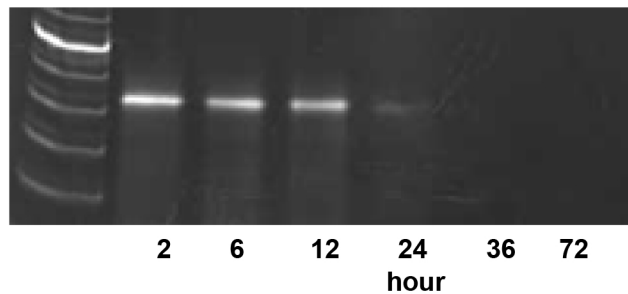
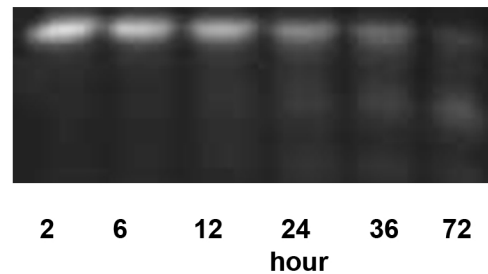
Name	Sequence
DNA-PK (forward) qRT-PCR Primer	AGAAGGCGGCTTACCTGAGT
DNA-PK (reverse) qRT-PCR Primer	GACATTTTTGTCAGCCAATCTTT
GAPDH (forward) qRT-PCR Primer	TCGCTCTCTGCTCCTCCTGTTT
GAPDH (reverse) qRT-PCR Primer	CGCCAATACGACCAAATCC
GSP[DNAPK] reverse-1	GGAGGGCTCCTTGACAAACACATCCAT
GR-5'primer	CTCTAGAGCGACTGGAGCACGAGGACACTA
GSP[DNAPK] reverse-2	GGAAGGCCCGGAGTGCGTGTACCAT

Supplementary Table S2. Sequences of primers for qRT-PCR and 5'RACE.

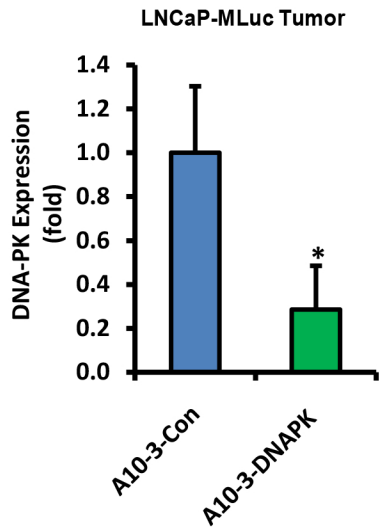
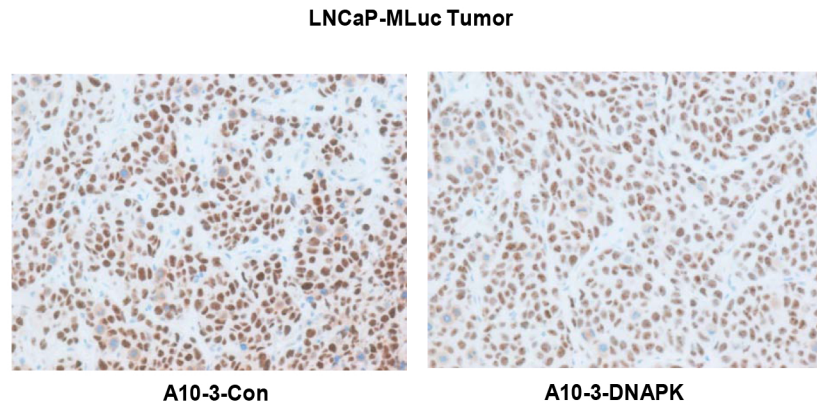
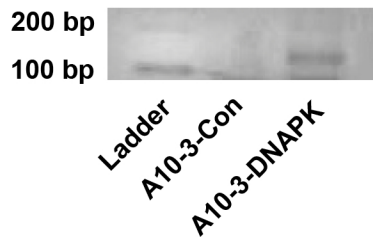
In vitro 5' Race



Supplementary Figure S1. 5'-RACE analysis of Aptamer siRNA chimera directed cleavage of DNA-PK. LNCaP-MLuc cells were treated with 400 nM A10-3-Con or A10-3-DNA-PK, in the absence of transfection reagents. Cells were transfected with 100 nM siDNAPK siRNA as a positive control. 5'-RACE analysis indicates siRNA mediated DNA-PK knock-down by detection of the predicted cleavage product

A**5% mouse serum medium****C****5% human serum medium****B****50% mouse serum medium****D****50% human serum medium**

Supplementary Figure S2. Stability of A10-3-DNAPK chimera in mouse and human serum. Annealed A10-3-DNAPK chimera was incubated in 5% mouse serum (A), 50% mouse serum (B), 5% human serum (C), or 50% human serum (D) supplemented medium at 37 C for 2-72 hours. Products were separated by non-denaturing gel electrophoresis and ethidium bromide staining.

A**B****C**

Supplementary Figures S3. Systemic DNA-PK silencing by Aptamer-siRNA chimera. Mice with established subcutaneous LNCaP-MLuc tumors were intravenously injected with aptamer-siRNA chimera (1 nmol/injection) on days -3 and -2. Tumors were harvested on day 0 and DNA-PK levels quantified by real-time RT-PCR (A) and Immunohistochemistry (B). 5'RACE analysis indicates siRNA mediated DNA-PK knock-down by detection of the predicted cleavage product (C).