

Supplementary Information

Bifunctional Au-templated RNA Nanoparticles Enable Direct Cell Uptake Detection and Treatment in Prostate Cancer

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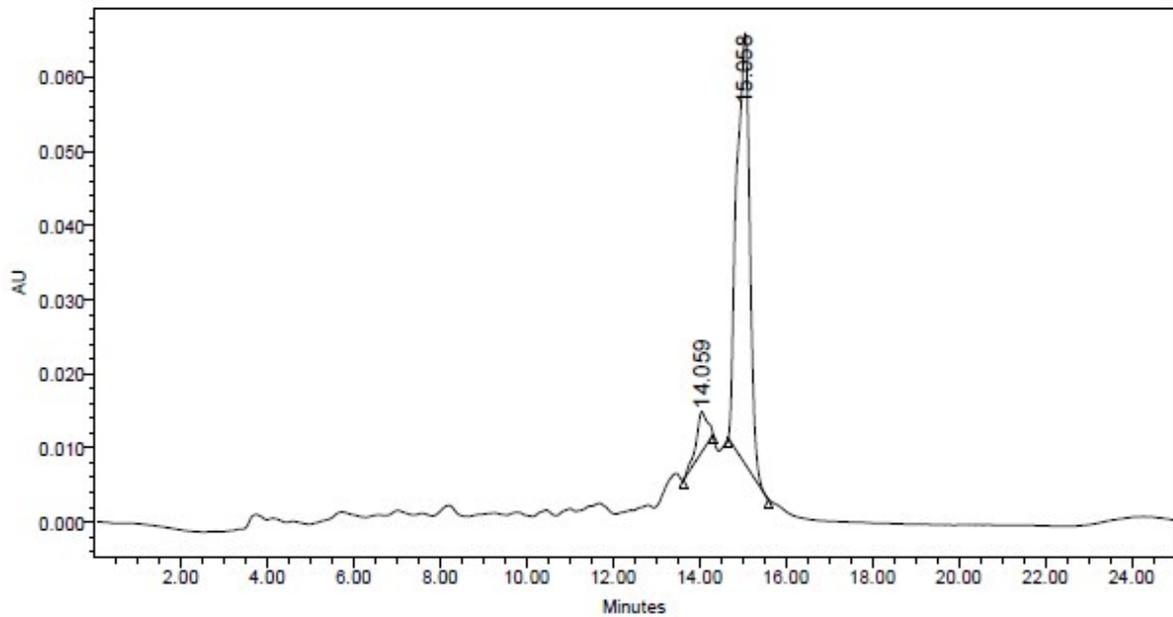
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Table S1. DLS data for RNA hybrids with and without gold nanoparticles

Samples	Effective Particle Size (nm)	Polydispersity Index	Zeta Potential
75A1S1	674 ± 146	0.55 ± 0.11	-1.1 ± 0.58
NSA1S1	1186 ± 77	0.58 ± 0.03	-0.6 ± 0.58
75A1S1C16	484 ± 50	0.63 ± 0.10	-2.5 ± 1.40
75A1S1_Gold	24 ± 2	0.37 ± 0.09	-17.6 ± 1.7
NSA1S1_Gold	19 ± 2	0.51 ± 0.06	-12.6 ± 1.2
75A1S1C16_Gold	102 ± 66	0.41 ± 0.07	-17.1 ± 1.65

SAMPLE INFORMATION

Sample Name:	75A1NH2	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	PURITY
Vial:	5	Acq. Method Set:	DS_RNA analysis_4_9_19_MS
Injection #:	1	Processing Method:	Default
Injection Volume:	25.00 ul	Channel Name:	2487Channel 1
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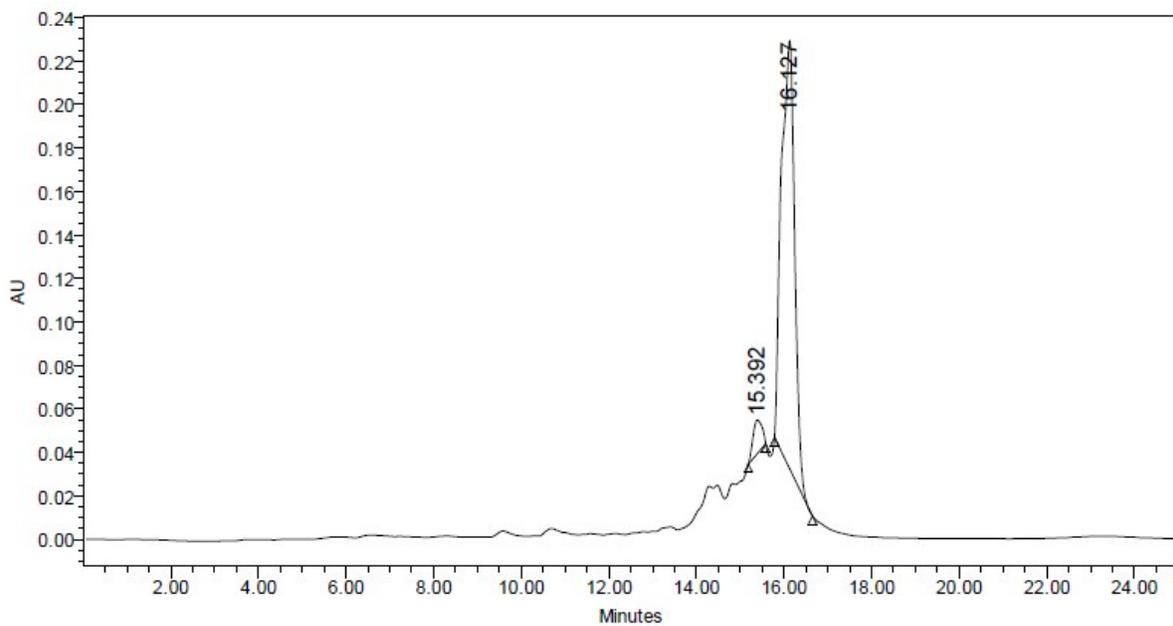


	RT	Area	% Area	Height
1	14.059	95143	7.30	5351
2	15.058	1208269	92.70	58261

Figure S1. HPLC chromatogram of amino functionalized GRP75 A1 RNA

SAMPLE INFORMATION

Sample Name:	75S1	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	PURITY
Vial:	6	Acq. Method Set:	DS_RNA analysis_4_9_19_MS
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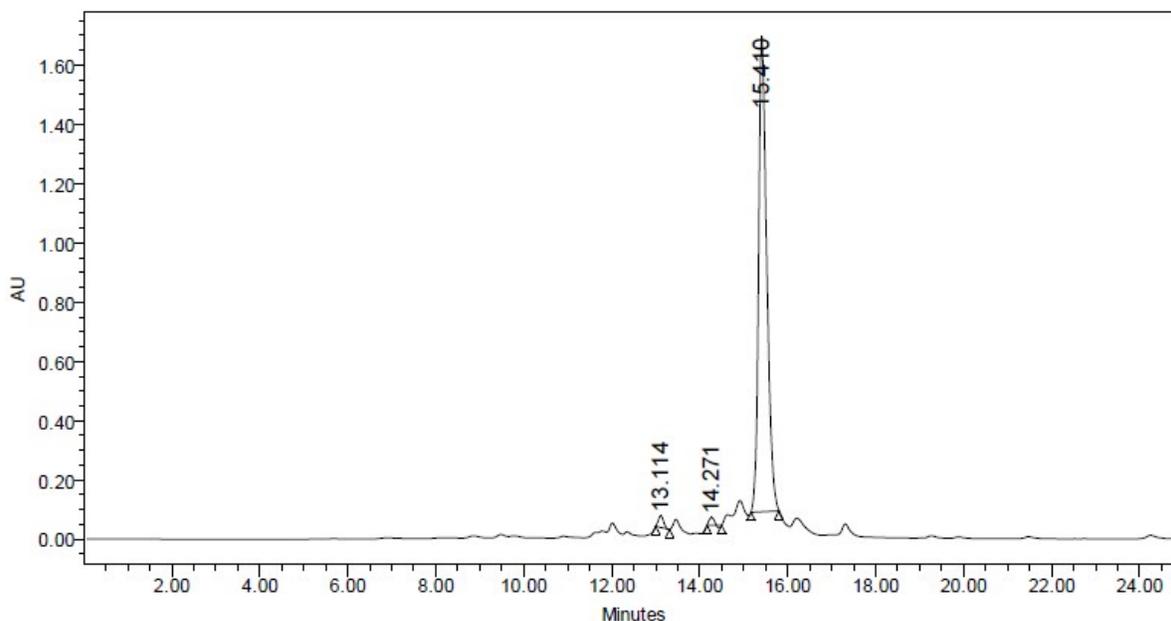


	RT	Area	% Area	Height
1	15.392	222437	5.15	15626
2	16.127	4094945	94.85	197157

Figure S2. HPLC chromatogram of GRP75 S1 RNA

SAMPLE INFORMATION

Sample Name:	NSA 1NH2	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	PURITY
Vial:	8	Acq. Method Set:	DS_RNA analysis_4_9_19_MS
Injection #:	1	Processing Method:	Default
Injection Volume:	25.00 ul	Channel Name:	2487Channel 1
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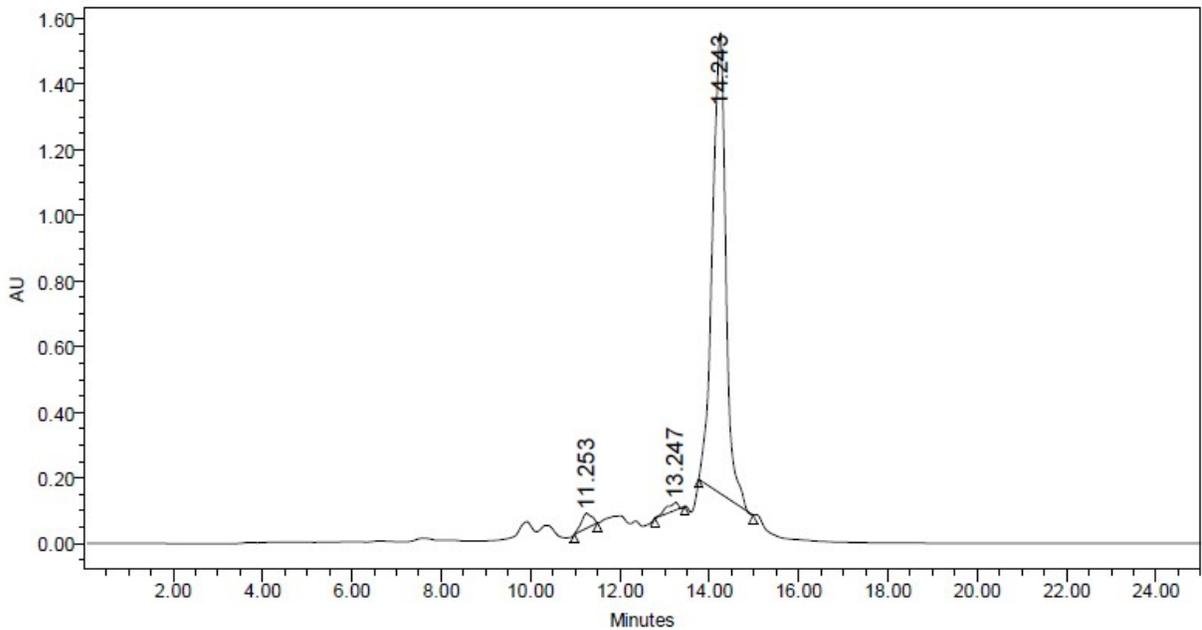


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1	13.114	326964	1.54	39693
2	14.271	255222	1.20	26559
3	15.410	20617738	97.25	1617291

Figure S3. HPLC chromatogram of amino functionalized NS A1 RNA

SAMPLE INFORMATION

Sample Name:	NSS1	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	PURITY
Vial:	7	Acq. Method Set:	DS_RNA analysis_4_9_19_MS
Injection #:	1	Processing Method:	Default
Injection Volume:	25.00 ul	Channel Name:	2487Channel 1
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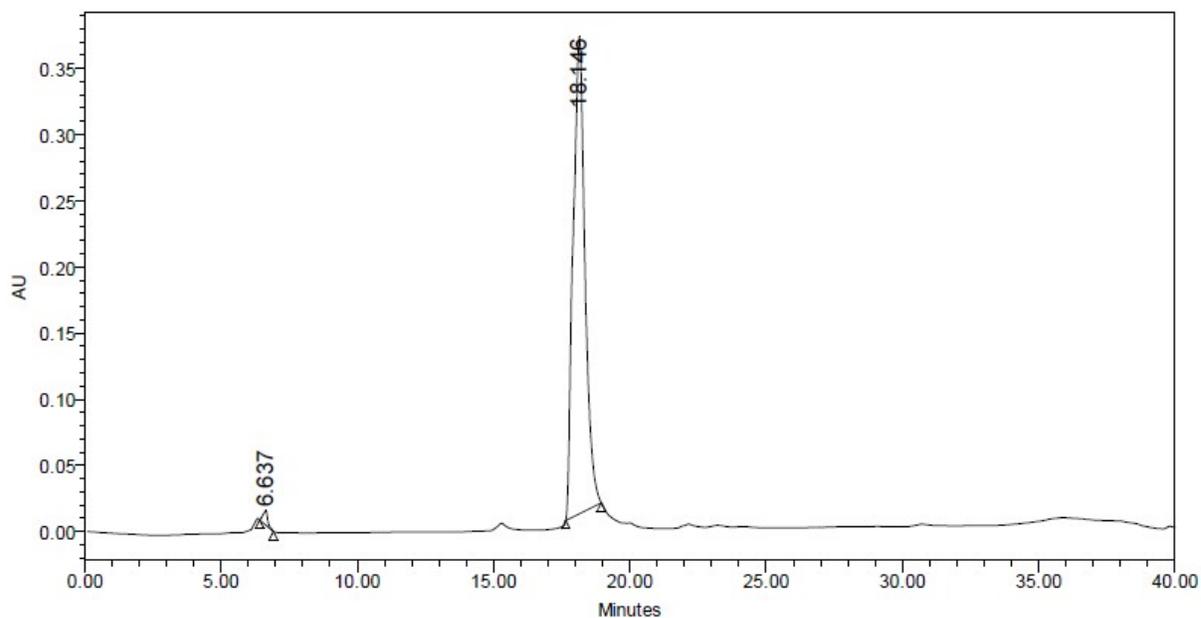


	RT	Area	% Area	Height
1	11.253	745077	2.44	45139
2	13.247	476309	1.56	22939
3	14.243	29312050	96.00	1404741

Figure S4. HPLC chromatogram of NS S1 RNA

SAMPLE INFORMATION

Sample Name:	c16-2	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	test
Vial:	4	Acq. Method Set:	SS_RNA BIO analysis_4_23_19_MS
Injection #:	1	Processing Method:	Default
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	RT	Area	% Area	Height
1	6.637	127004	1.16	11052
2	18.146	10843518	98.84	360505

Figure S5. HPLC chromatogram of C16 conjugated GRP75 S1 RNA

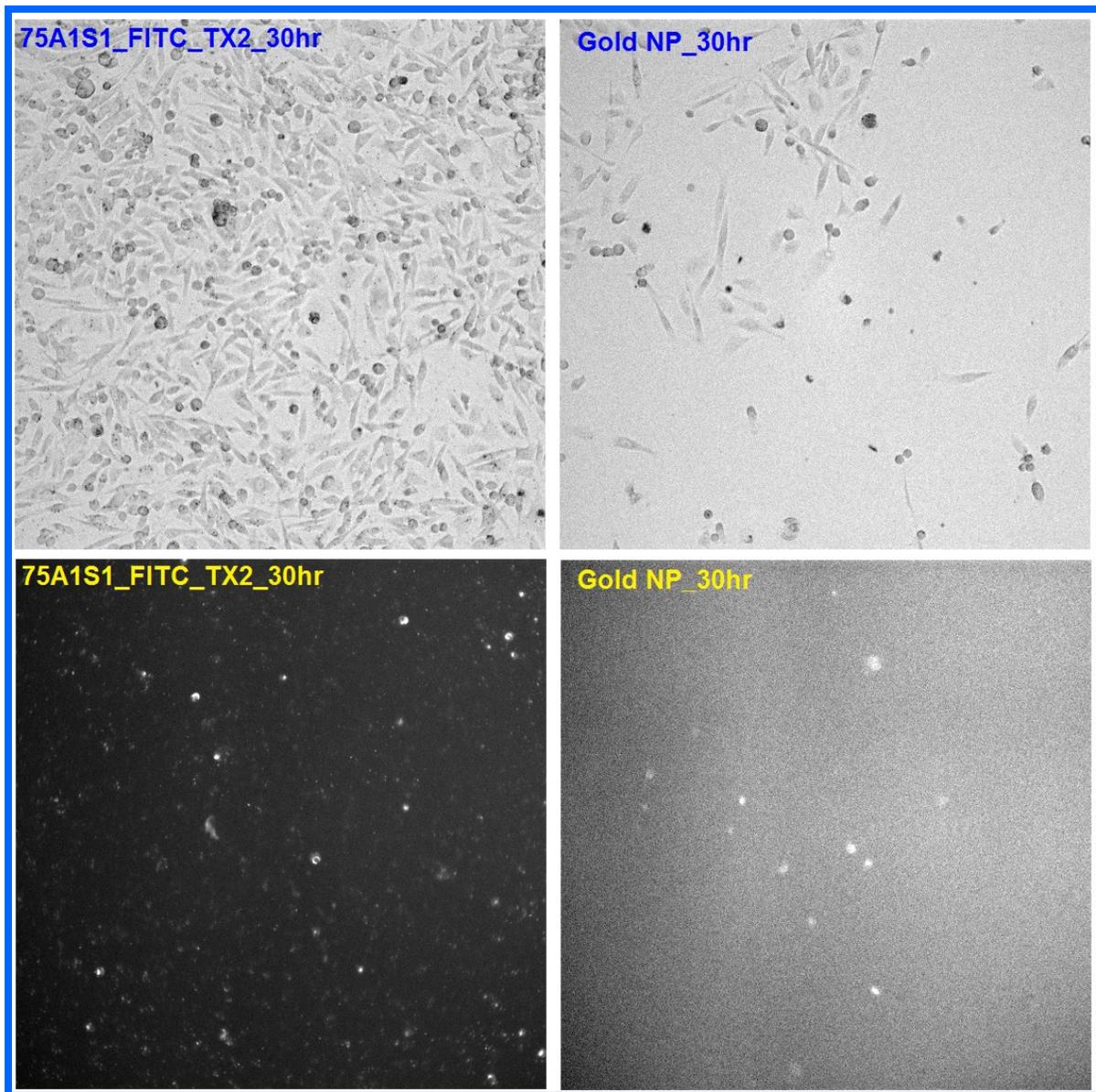


Figure S6. High content screen microscopy images for PC-3 cell uptake by FITC-tagged RNA hybrids and citrate-stabilized gold nanoparticles at 30 h.

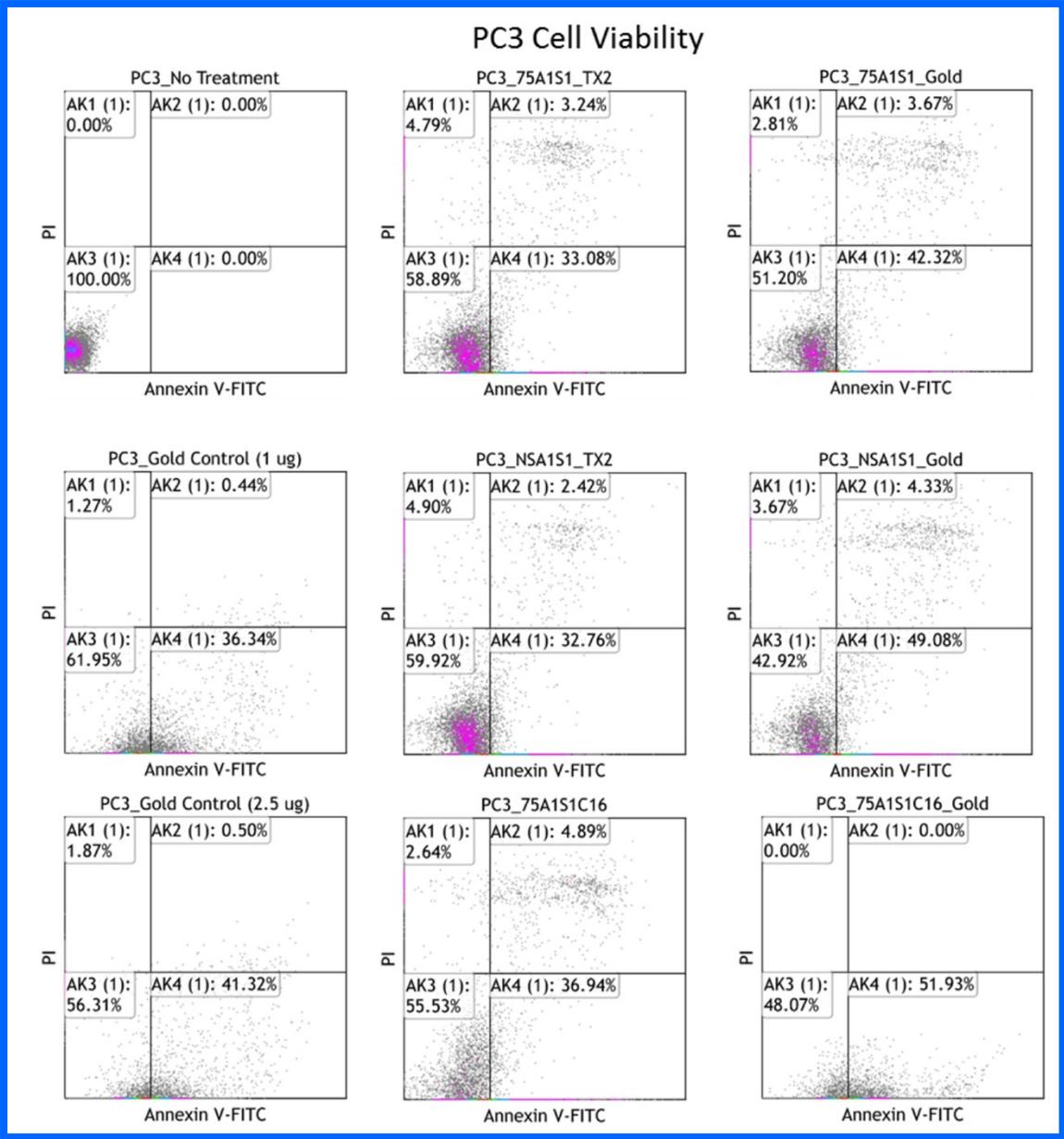


Figure S7. Flow-cytometry data for PC-3 cell viability using Annexin V-PI stain.