Supporting Information

For

Therapeutic Nanosystems Co-deliver Anticancer Drugs and Oncogene SiRNA to Achieve Synergetic Precise Cancer Chemo-gene Therapy

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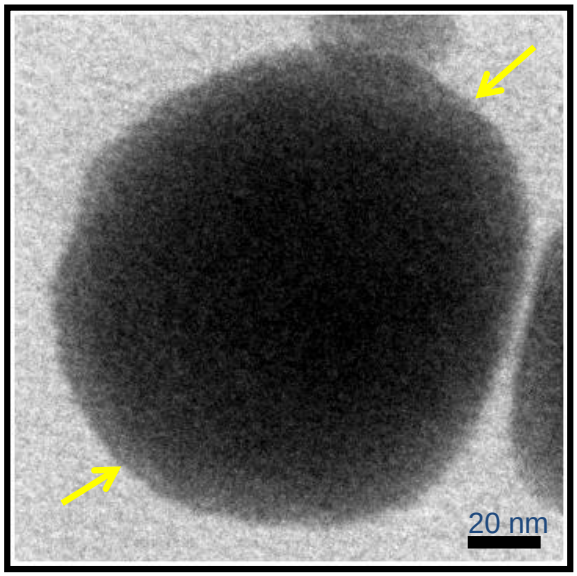

Figure S1 TEM image of RGD-SeNPs/siRNA with a large scales in aqueous solution.

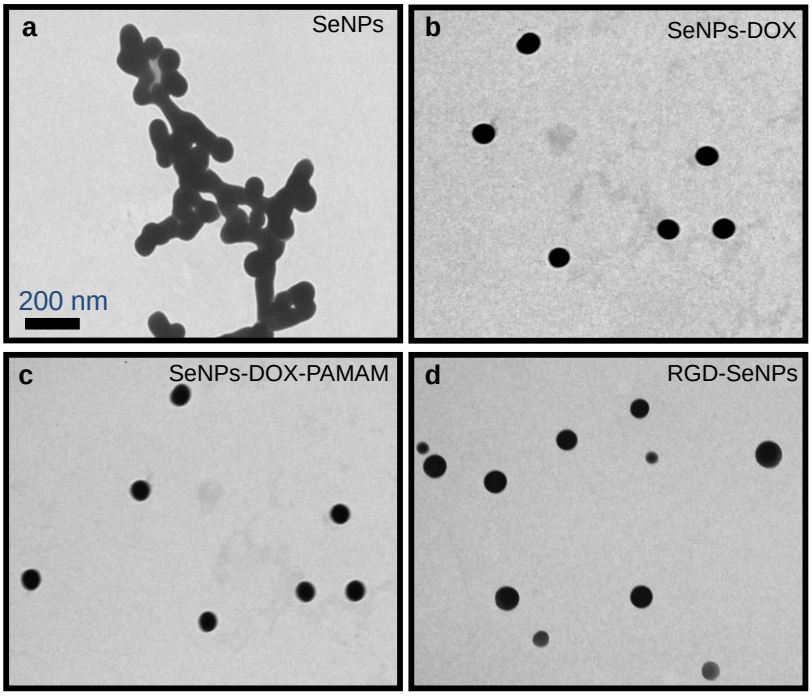

Figure S2 TEM images of SeNPs **(a)**, SeNPs-DOX **(b)**, SeNPs-DOX-PAMAM **(c),** and RGD-SeNPs **(d).**

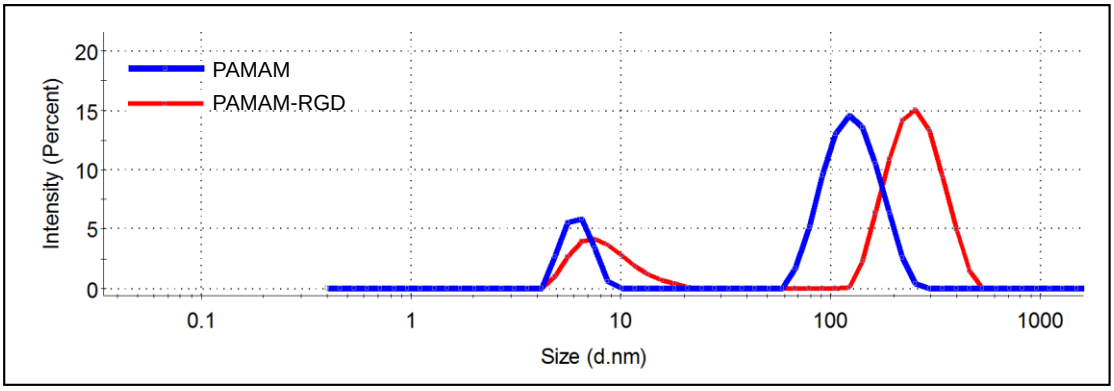

Figure S3 The size distribution of PAMAM and PAMAM-RGD alone.

Table S1 The DOX LE (%) and EE (%) of RGD-SeNPs.

Sample	LE (%)	EE (%)
RGD-SeNPs	10.3%	44.97%

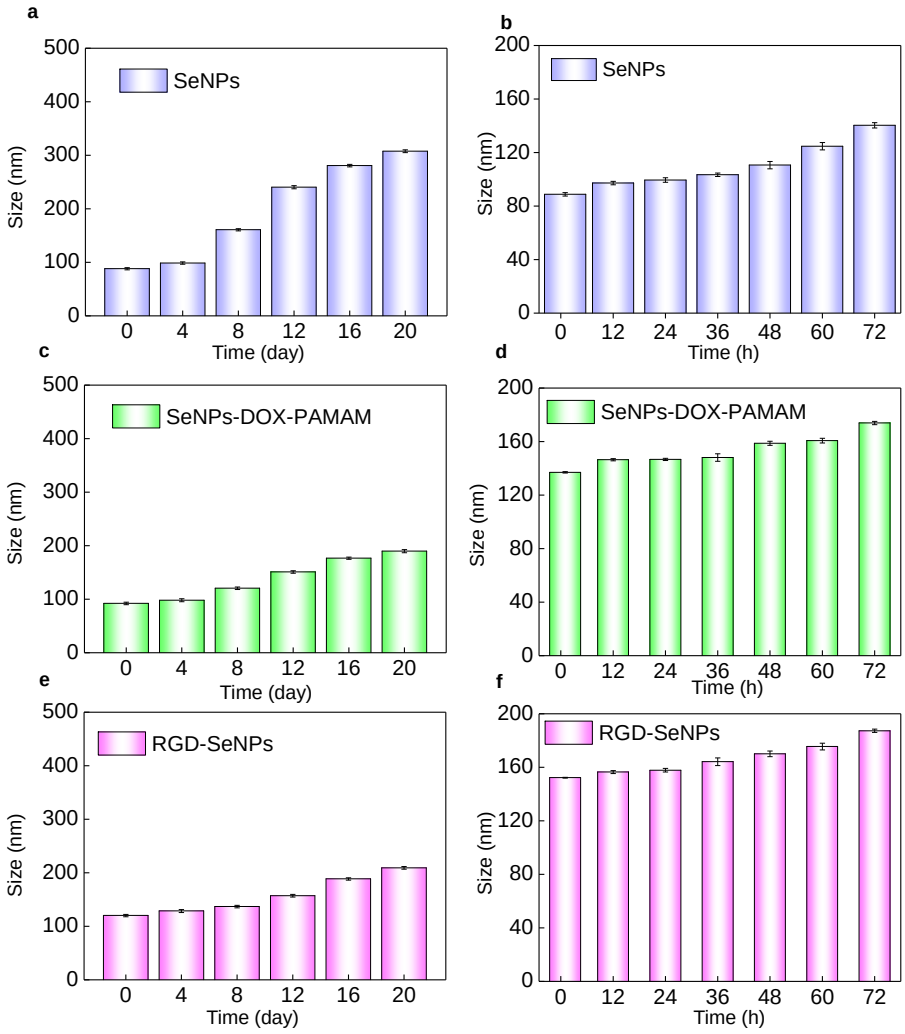

Figure S4 (a), (c) and **(e)** The stability of Se, SeNPs-DOX-PAMAM and RGD-SeNPs in water solution for 20 days observation. **(b), (d)** and **(f)** The stability of SeNPs, SeNPs-DOX –PAMAM and RGD-SeNPs in FBS solution.

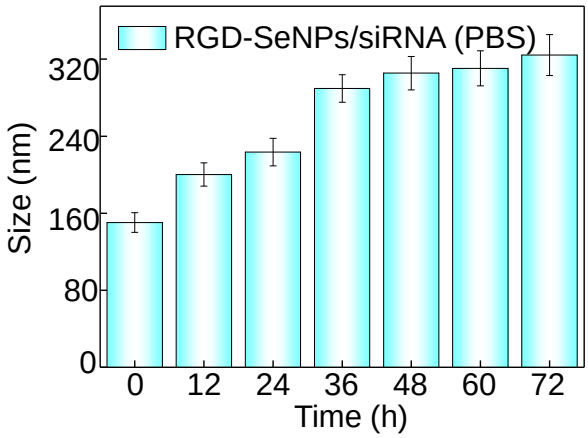

Figure S5 The size changes of RGD-SeNPs/siRNA in PBS solution.

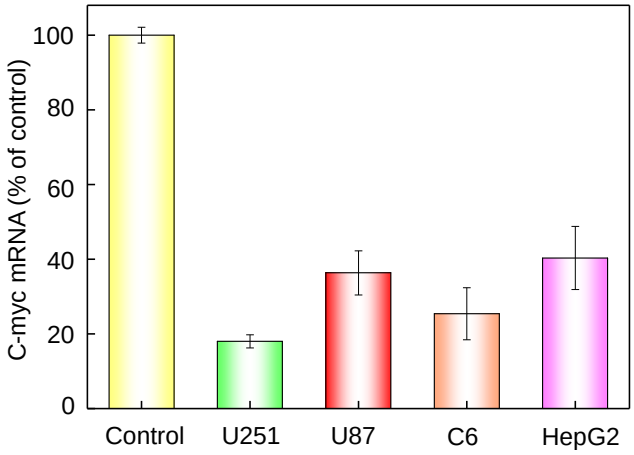

Figure S6 Suppression of c-myc mRNA expression in various cells (treatment time, 24h).

Table S2 IC_{50} value of SeNP、DOX and lipofectimine 2000-siRNA in different cells.

Materials	IC_{50} (nM)			
	U251	U87	C6	Chem-5
SeNPs	1160	2870	5223	8000
DOX	84.32	157.5	9.12	73.14
Lipofectimine 2000-siRNA	5.7	3.3	3.16	8.0

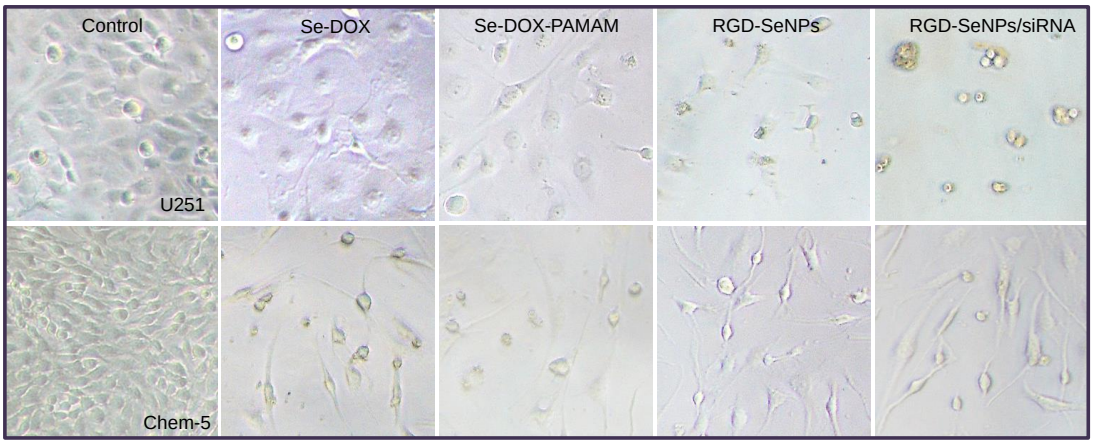

Figure S7 The images of U251 and Chem-5 cells treated with the various nanodrugs for 72 h.