

*Electronic Supporting Information for*

Chondroitin sulfate-functionalized polyamidoamine-mediated miR-  
34a delivery for inhibiting the proliferation and migration of  
pancreatic cancer

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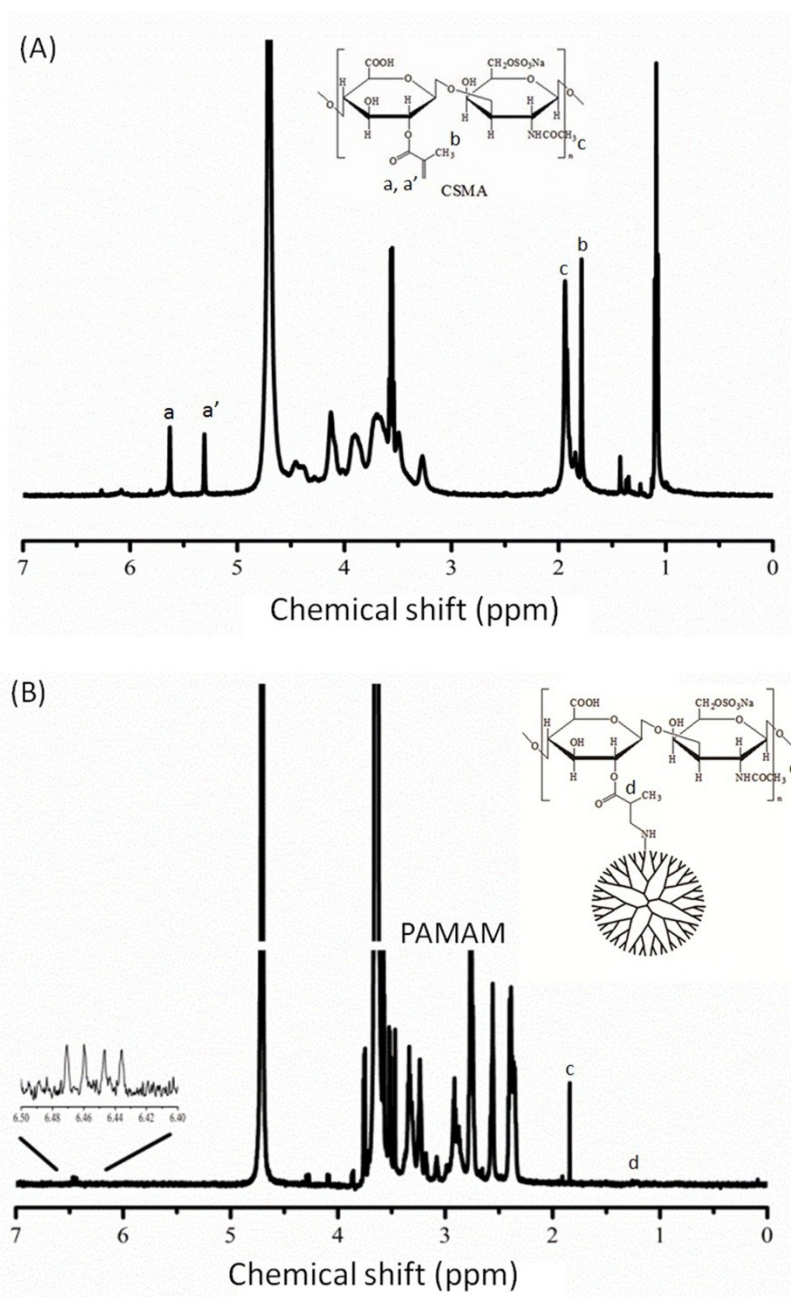
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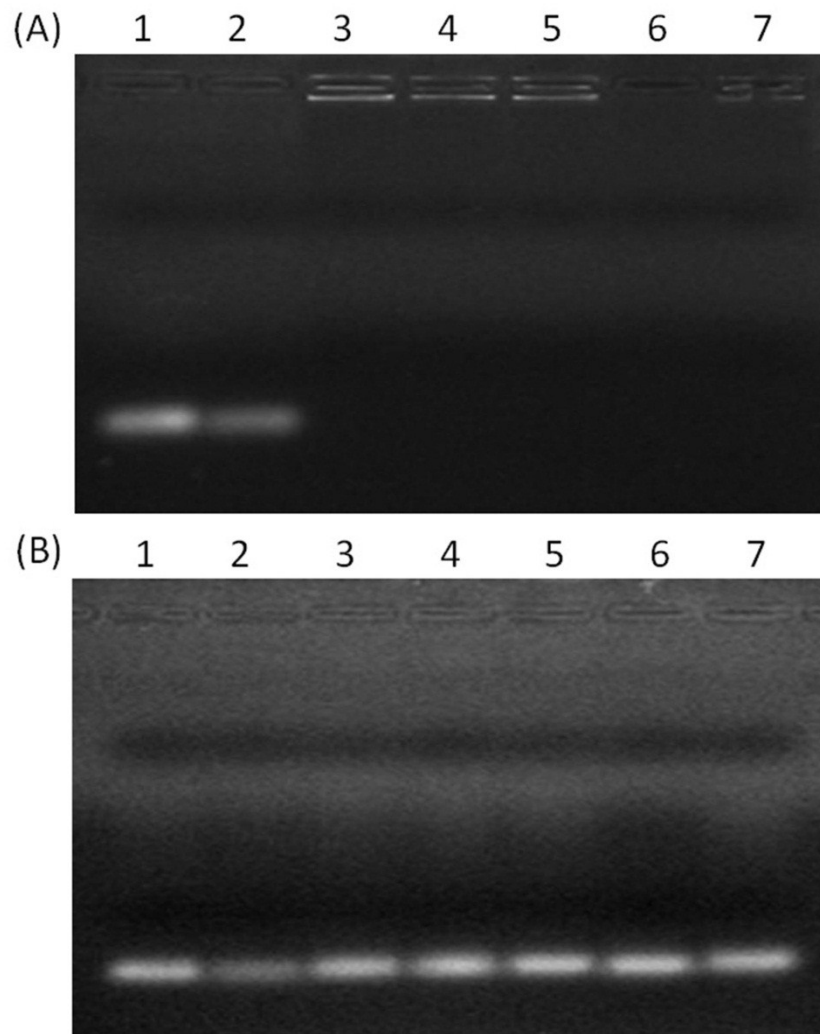
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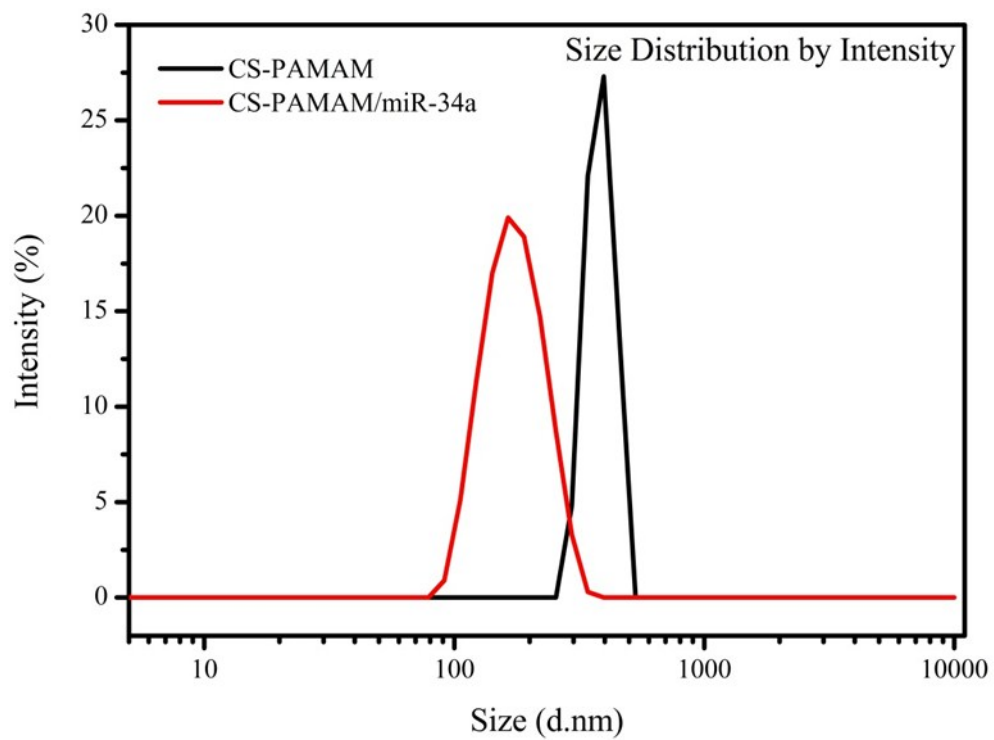
**Fig. S1.**  $^1\text{H}$  NMR spectra of CSMA (A) and CS-PAMAM (B) in  $\text{D}_2\text{O}$ .



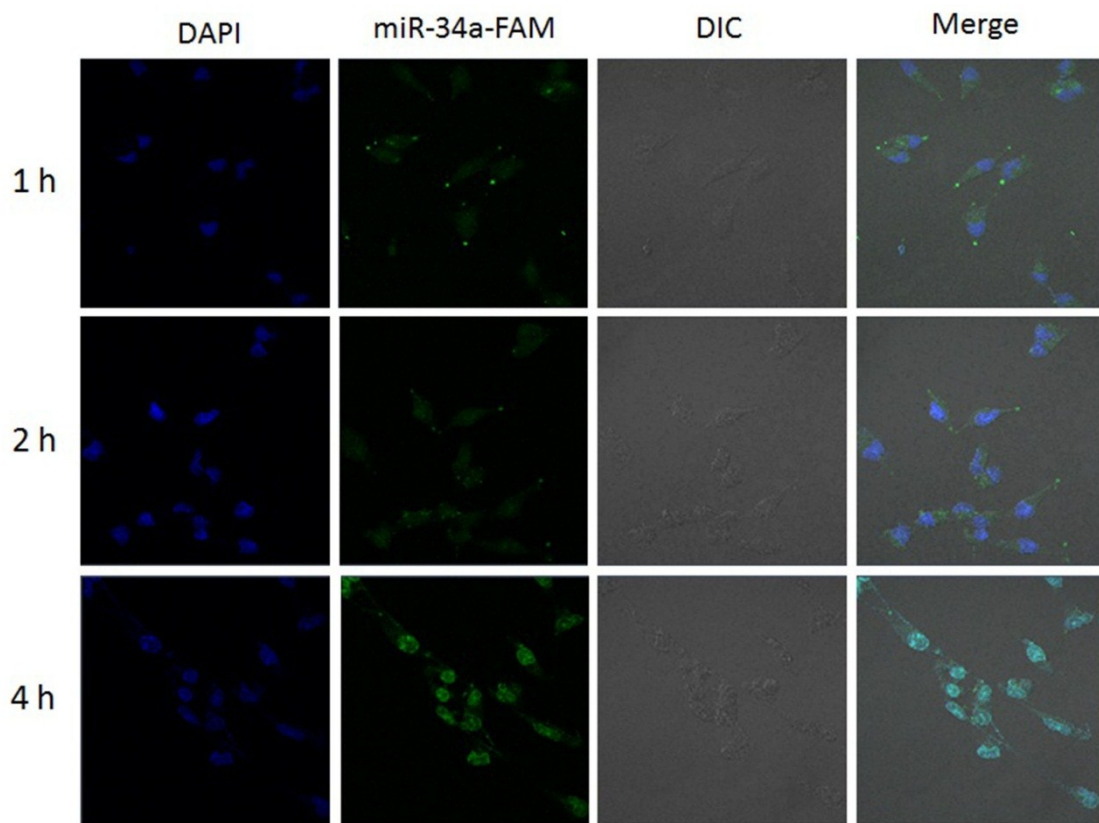
**Fig. S2.** Serum stability of CS-PAMAM/miR-34a nanocomplex at a mass ratio of 40 through gel retardation assay.

(A) Lane 1: naked miR-34a; lane 2: naked miR-34a in 10% FBS for 6 h; lane 3-7: CS-PAMAM/miR-34a nanocomplex in 10% FBS for 0.5, 1, 2, 4 and 6 h, respectively.

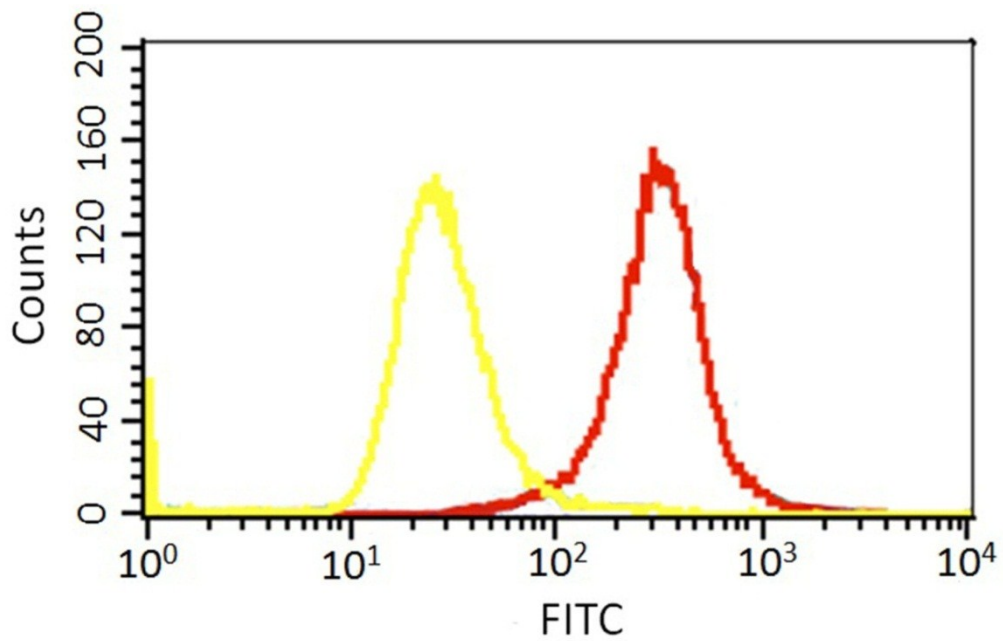
(B) Lane 1: naked miR-34a; lane 2: naked miR-34a in 10% FBS for 6 h; lane 3-7: CS-PAMAM/miR-34a nanocomplex in 10% FBS for 0.5, 1, 2, 4 and 6 h, and then treated with 4 mg/mL heparin for 2 h.



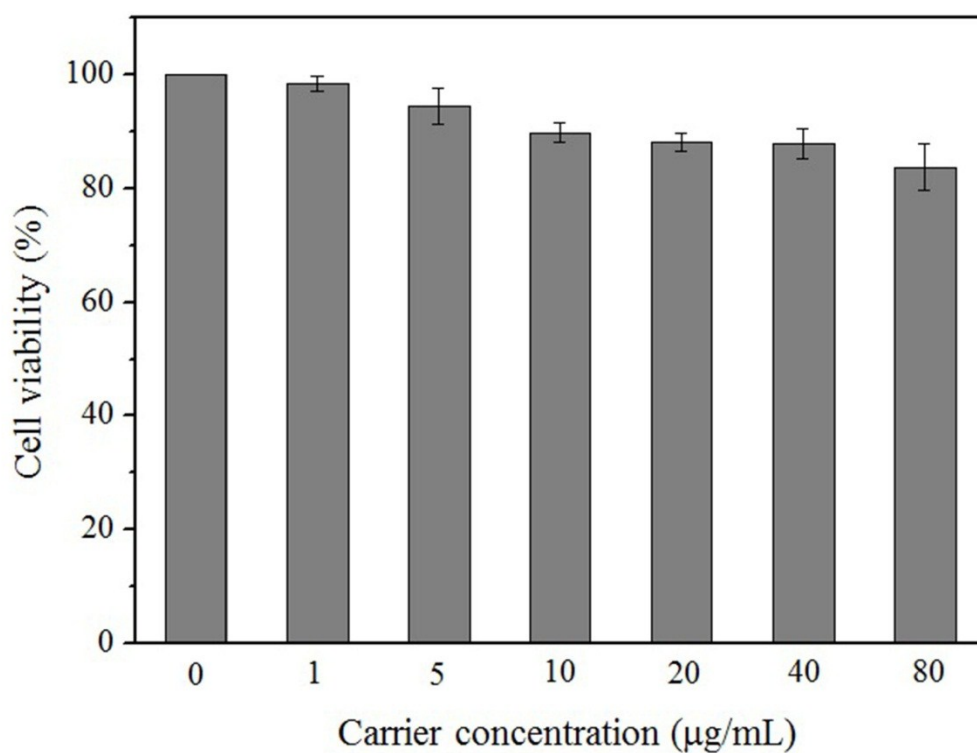
**Fig. S3.** DLS curves of CS-PAMAM and CS-PAMAM/miR-34a nanocomplex (mass ratio of 40) obtained in distilled water.



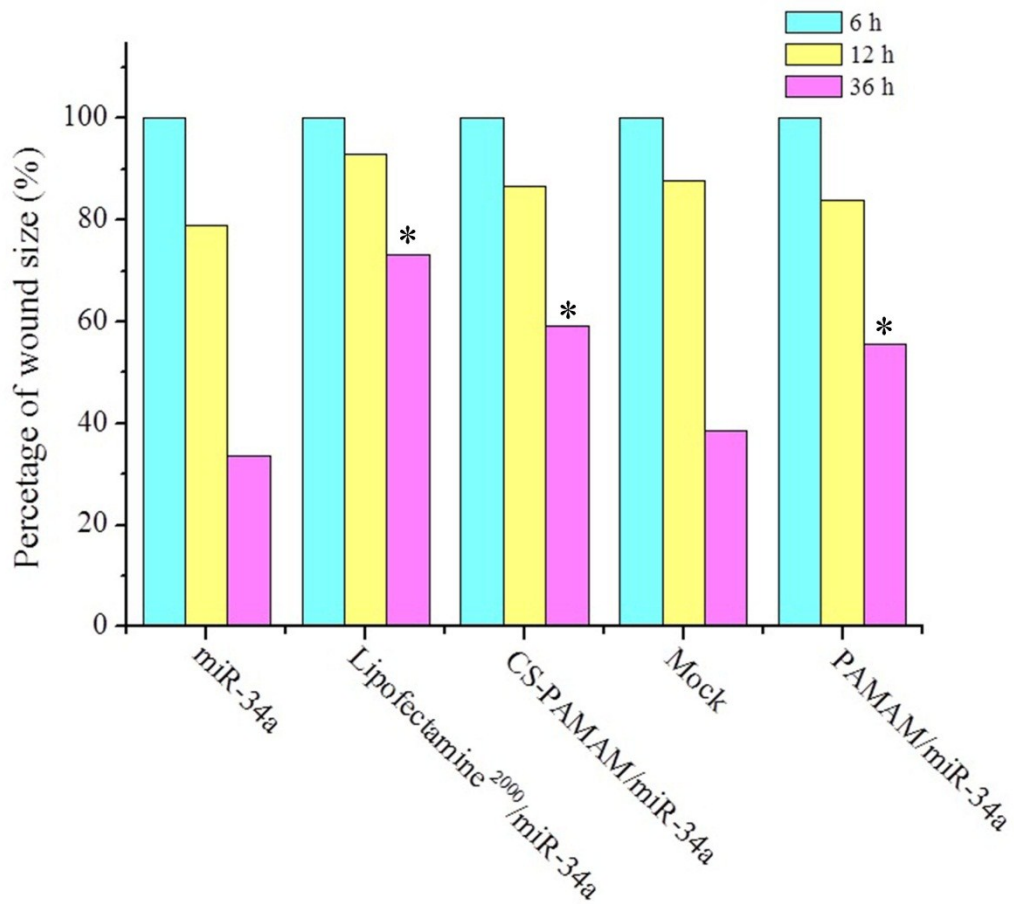
**Fig. S4.** CLSM images of CS-PAMAM-mediated miR-34a transfection (mass ratio of 40) in MiaPaCa-2 cells for 1, 2 and 4 h. Blue, nuclei (DAPI); green (FAM-labeled miR-34a).



**Fig. S5.** The CD44 expression level of 3T3 (yellow) and MiaPaCa-2 (red) cells detected by flow cytometry, using FITC-labeled anti-CD44 monoclonal antibody.



**Fig. S6.** Cytotoxicity analysis of CS-PAMAM in MiaPaCa-2 cells. The data were expressed as mean value  $\pm$  SD of three experiments.



**Fig. S7.** Quantitative analysis of wound size in MiaPaCa-2 cells after miR-34a transfection. The wound size at 6 h in each group was set as 100%.