



## Supporting Information

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Effective Delivery of Hypertrophic miRNA Inhibitor by  
Cholesterol-Containing Nanocarriers for Preventing Pressure  
Overload Induced Cardiac Hypertrophy

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## Effective Delivery of Hypertrophic miRNA Inhibitor by Cholesterol-Containing Nanocarriers for Preventing Pressure Overload Induced Cardiac Hypertrophy

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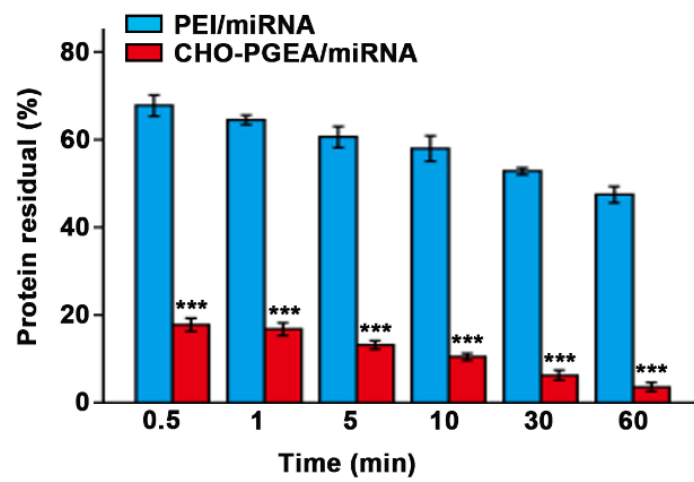
**Table S1** | PDI values of complexes

Samples	Average PDI <sup>a</sup> (at different N/P ratios)			
	5	10	15	20
CHO-PGEA/miRNA	0.17	0.16	0.15	0.13
PEI/miRNA	0.26	0.27	0.16	0.15

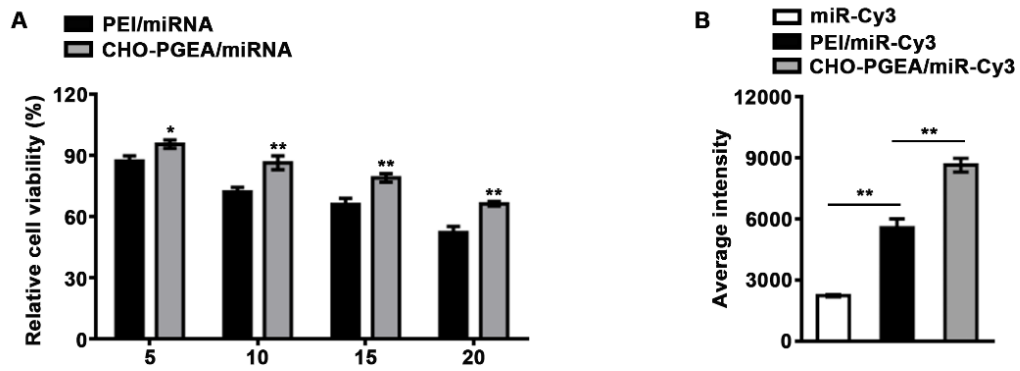
<sup>a</sup>Determined from DLS results (Source data are provided as a Source Data file). PDI = Polydispersity Index.

**Table S2** | Primers used in this work.

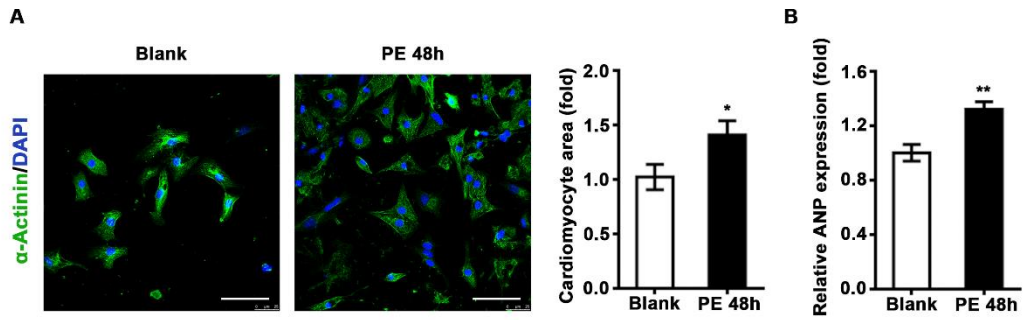
Gene	Forward primer	Reverse primer
FOXO3	5'-CGTTGTTGGTTTGAATGTGG-3'	5'-GAGAGCAGATTTGGCAAAGG-3'
ANP	5'-GATTGGAGCCCAGAGTGGAC-3'	5'-CAGTGGCAATGTGACCAAGC-3'
GADPH	5'-CATGGCCTTCCGTGTTCTA-3'	5'-GCGGCACGTCAGATCCA-3'



**Figure S1.** BSA protein assay of s-PGEA and PEI. Quantitative data are mean  $\pm$  SEM, \*\*\*  $P < 0.001$  by Student's t-test ( $n = 3$ ).



**Figure S2.** (A) MTT assay of H9C2 cells treated with CHO-PGEA/miRNA or PEI/miRNA complexes at various N/P ratios. (B) Average intensity of Cy3 in cellular internalization assay by MD. Quantitative data are mean  $\pm$  SEM, \* $P < 0.05$ , \*\*  $P < 0.01$  by Student's t-test ( $n = 6$ ).



**Figure S3.** Hypertrophic cardiomyocytes induced by PE. **(A)** Confocal fluorescence images of immunofluorescence staining and quantification of cardiomyocyte areas ( $\alpha$ -Actinin showed in green, and the nucleus is stained blue by DAPI; scale bar: 50  $\mu$ m). **(B)** Relative expression levels of ANP. Quantitative data are mean  $\pm$  SEM, \* $P$ <0.05, \*\*  $P$ <0.01 by Student's t-test ( $n = 4$ ).