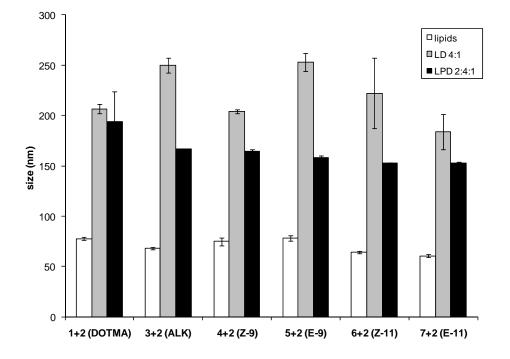
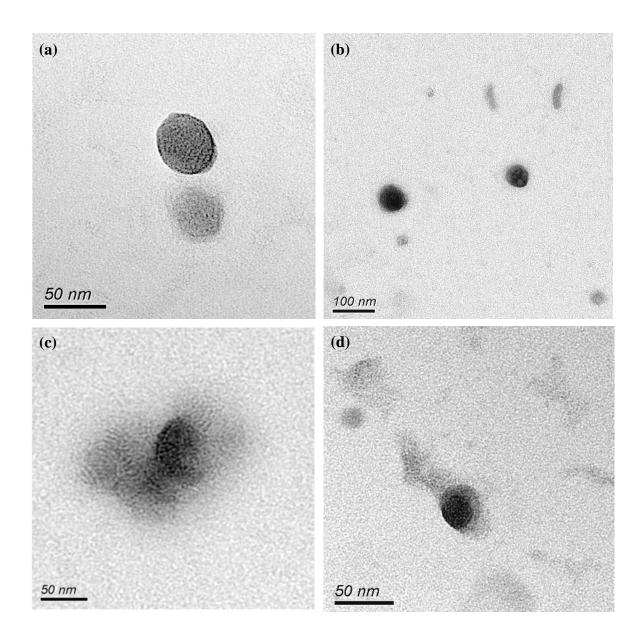
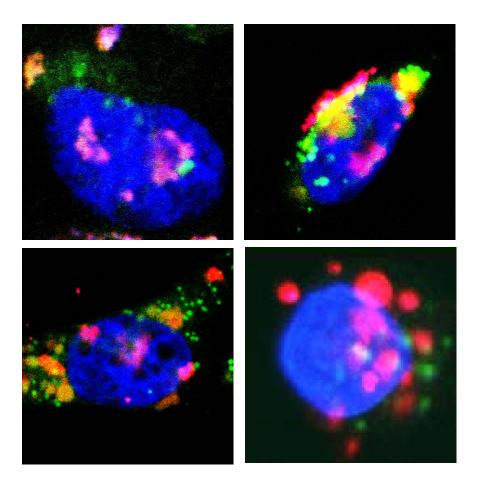
## SUPPLEMENTARY INFORMATION



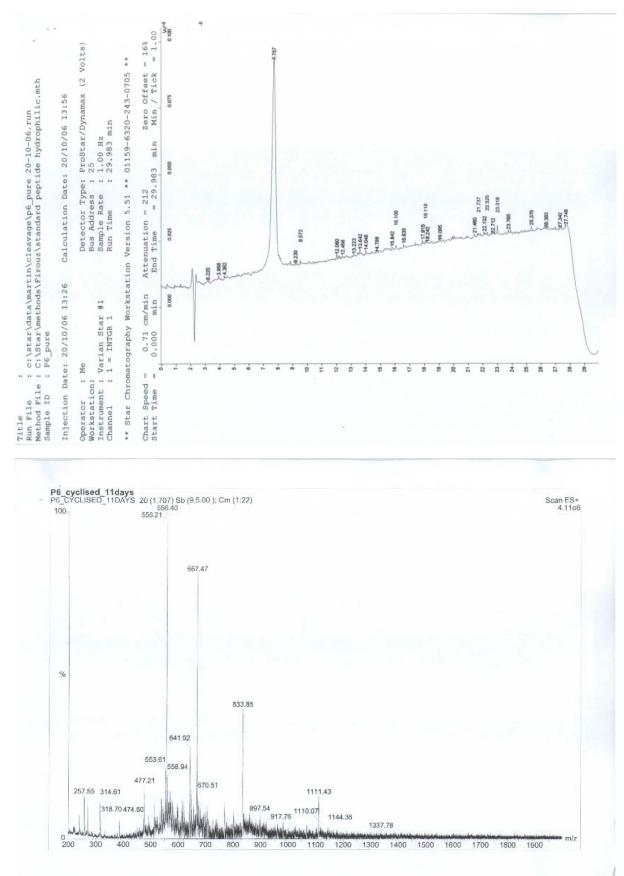
**Figure 1 SI.** Hydrodynamic size analysis of  $\Box$  cationic lipid+2 vesicles,  $\blacksquare$  LD complexes at 4:1 weight ratio and  $\blacksquare$  LPD complexes at 2:4:1 weight ratio (n=5 ± standard deviation) at a final ctDNA concentration of 0.1mg/ml using Brookhaven Zeta-Plus particle sizer, Brookhaven Instruments, USA.



**Figure 2 SI.** Transmission electron microscopy of LD complexes prepared at 4:1 weight ratio using pDNA with lipids (a) **1:2** and (c) **3:2**; and LPD complexes prepared at 2:4:1 weigh ratio using peptide **8**, pDNA and lipids (b) **1:2** and (d) **3:2**. All lipids were formulated at 1:1 weight ratio with 2, and formulated at a final concentration of 0.01 mg/mL of pDNA.

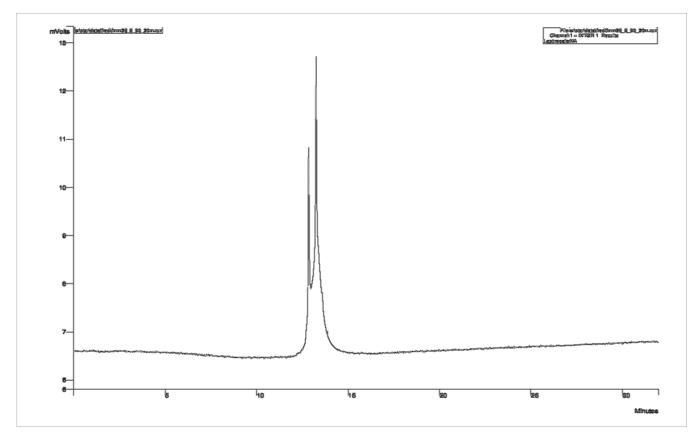


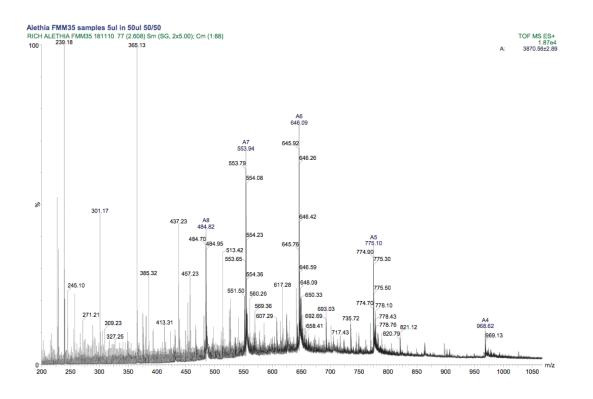
**Figure 3 SI.** Confocal fluorescence microscopy studies in MDA-MB-231 cells transfected with LPD complexes prepared using the lipids (a) **1:2**, (b) **5:2**, (c) **6:2** and (d) **7:2** containing 10% BODIPY-labeled HPC (green), unlabelled peptide **8** and rhodamine-labeled pDNA (red) at 2:4:1 weight ratio. The cell nucleus was stained with DAPI (blue). Cells were fixed after a 4 hour incubation period with the LPD complexes.



## Analytical data for peptide **8** (K<sub>16</sub>GACRRETAWACG)

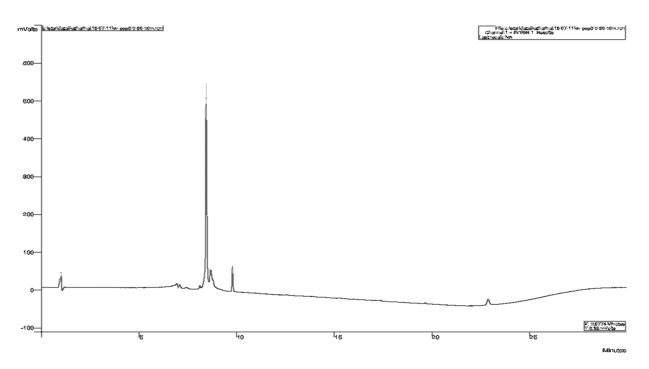
Analytical data for peptide **9** (K<sub>16</sub>GACRRETAWACGK\*G), where K\* indicates a Lys residue with Rhodamine Green<sup>TM</sup> attached to the  $\epsilon$ -NH<sub>2</sub>.



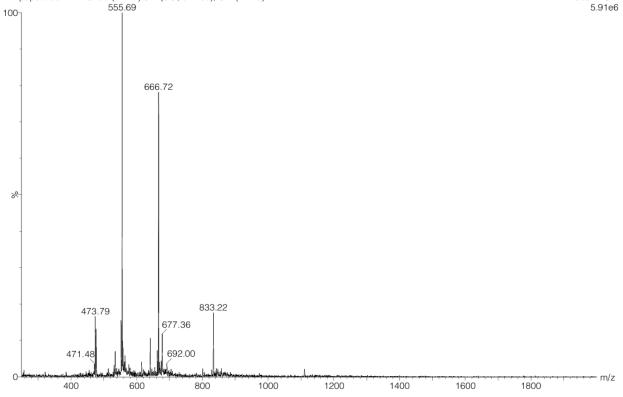


5

## Analytical data for peptide **10** (K<sub>16</sub>GACEARWARTCG)



19-Jul-2011 KW-pep6-clean-HPLC 39 (0.721) Sm (SG, 5x1.00); Cm (24:43) 100- 555.69



1: Scan ES+

## Analytical data for peptide $11 (K_{16})$

