Electronic Supplementary Information

Coadministration of chemotherapy and PI3K/Akt pathway treatment with acidity/CathB enzyme multistage responsive nanocarrier for inhibiting metastasis of breast cancer

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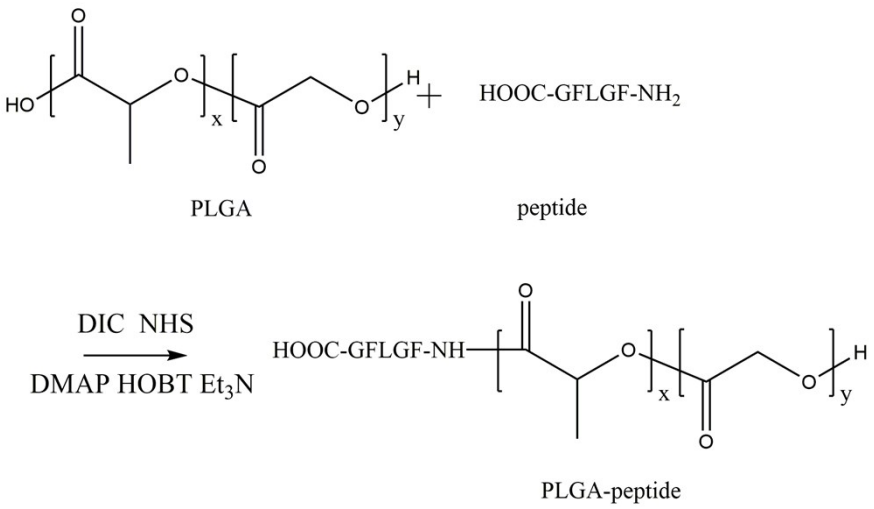

Figure S1 Synthesis of PLGA-peptide

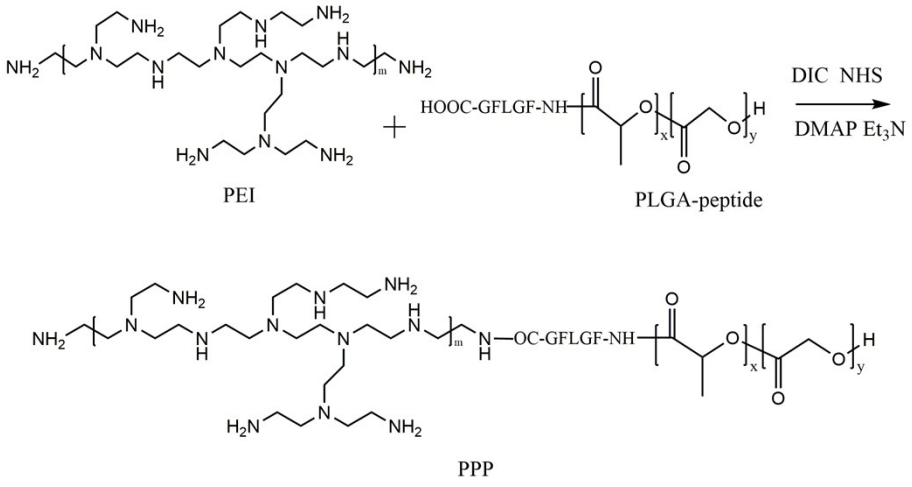

Figure S2 Synthesis of PPP-peptide-PEI

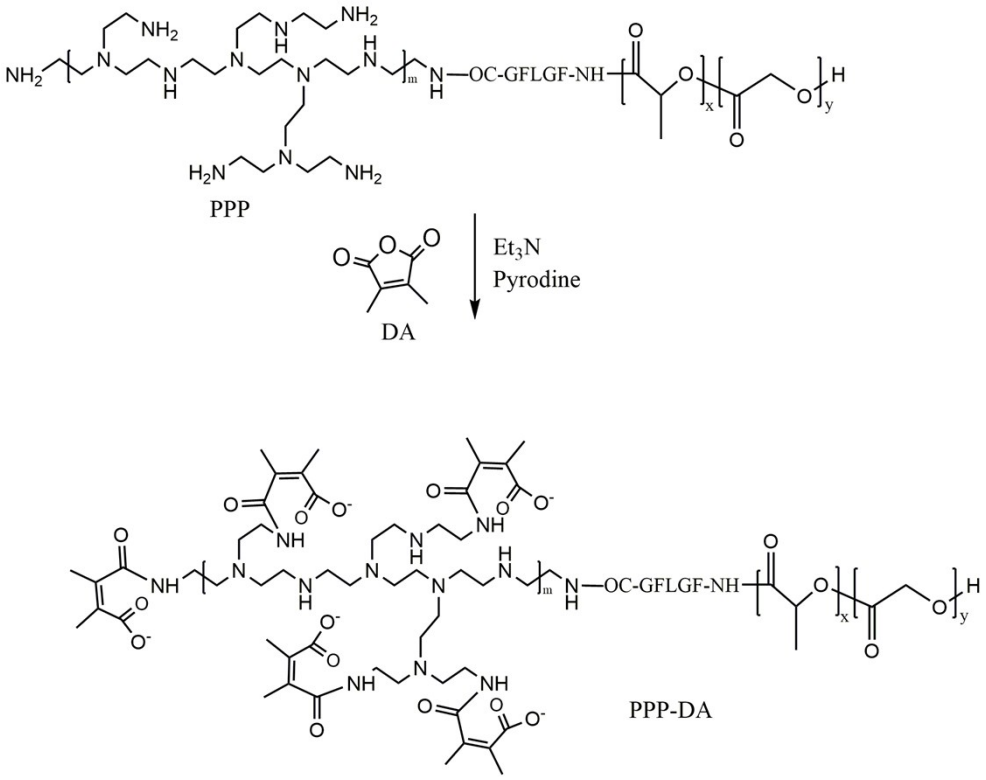

Figure S3. Synthesis of PPP-DA

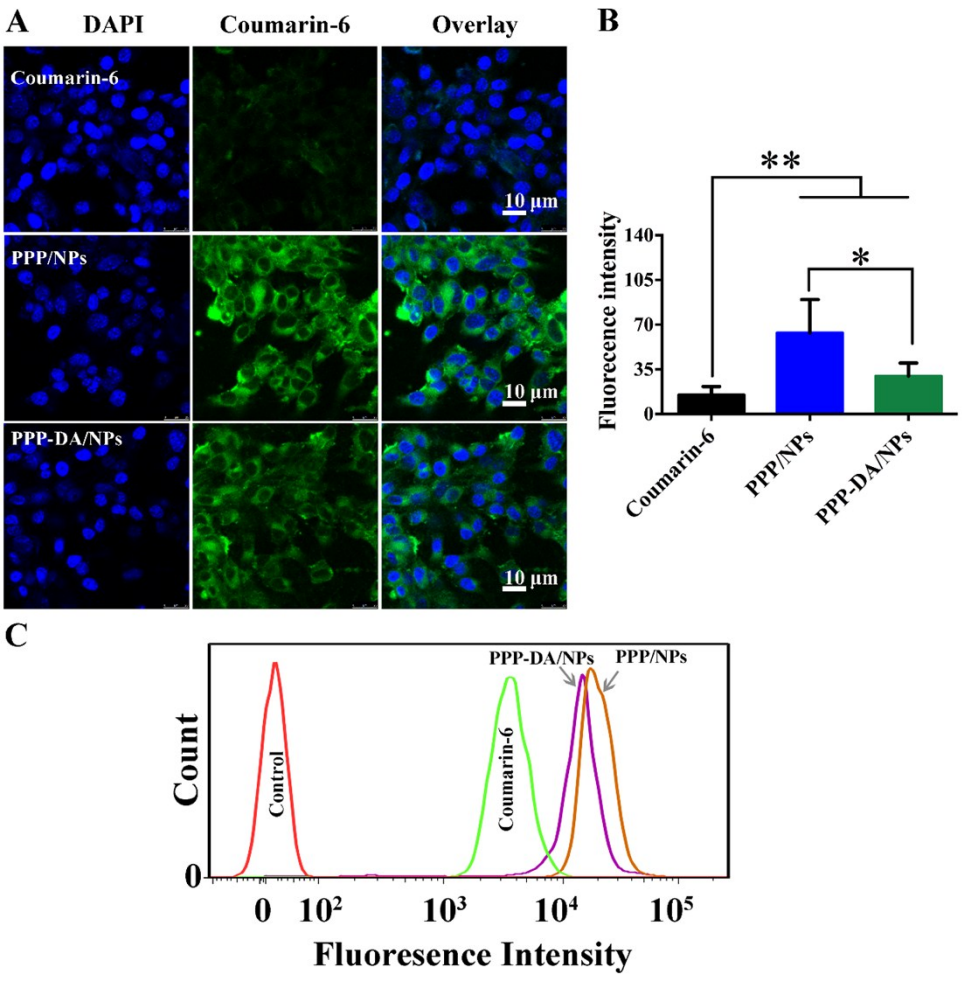

Figure S4. CLSM images (A) and fluorescence quantitative analysis (B) of 4T1 cells after incubation with coumarin-6, PPP/NPs and PPP-DA/NPs for 4 h, in columns from left to right correspond to DAPI (blue), Coumarin-6 (green) and overlay of DAPI and coumarin-6, respectively. (C) Flow cytometry results of 4T1 cells treated with free coumarin-6, PPP/NPs and PPP-DA/NPs (coumarin-6 concentration 2 μg/mL) for 4 h. *$P < 0.05$, **$P < 0.01$.

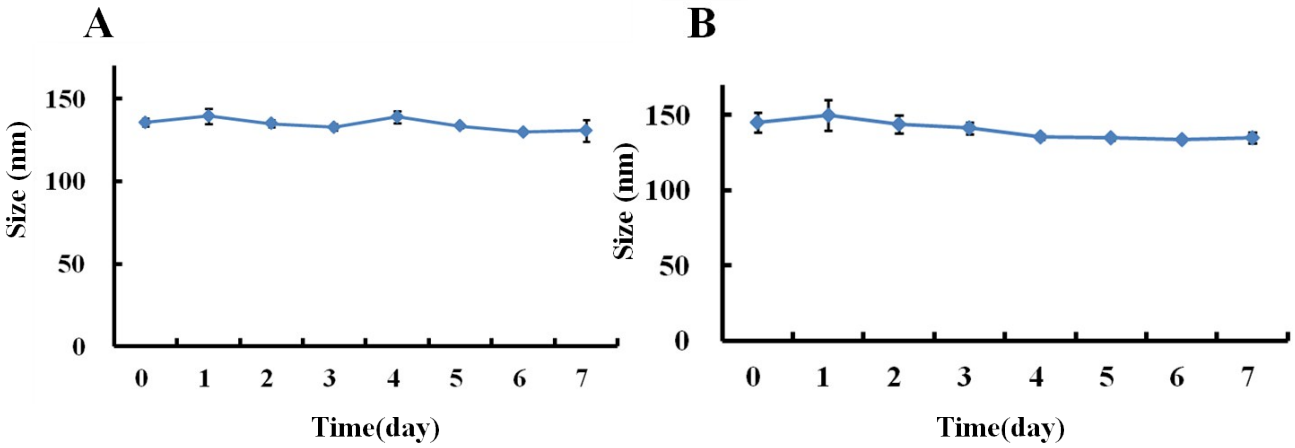

Figure S5. The hydrodynamic diameter of PPP-DA/NPs during incubation in the (A) PBS(0.05M, pH 7.4, 4℃) and (B) RPMI-1640 cell culture medium (pH 7.4, 37℃) supplemented with 10% fetal calf serum for 7days.

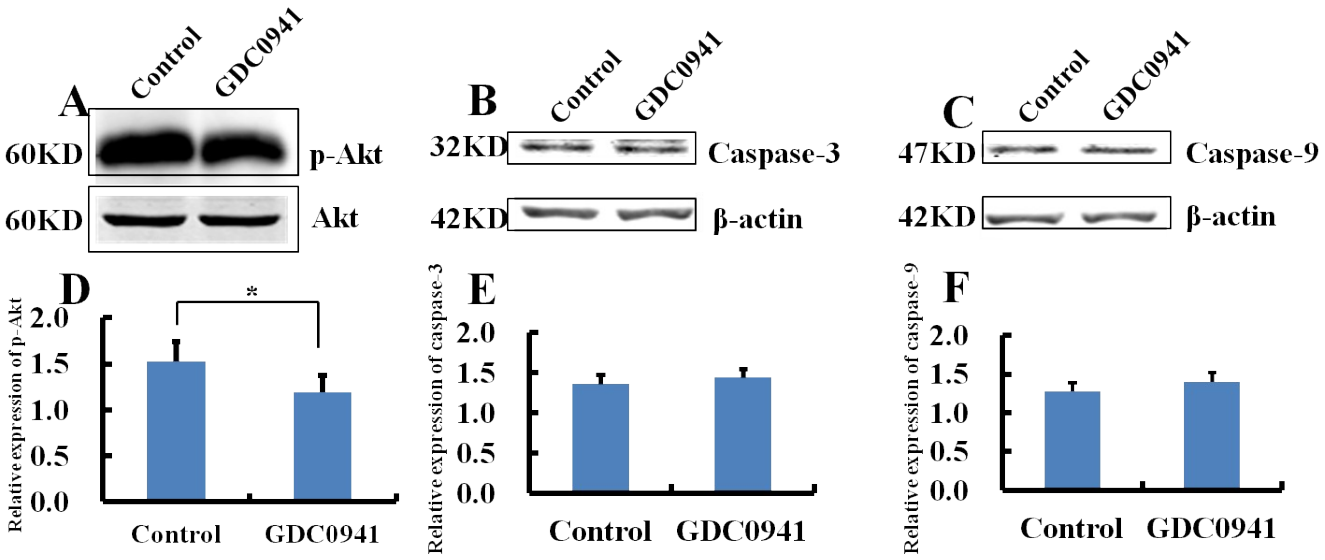

Figure S6. The antitumor mechanistic studies were confirmed by western bloting analysis.Cropped gels images (A, B) and semi-quantitative analysis (C-F) were performed to examine the effect of GDC0941 alone on the expression of p-Akt, Caspase-3/9 protein in 4T1 tumor cells.

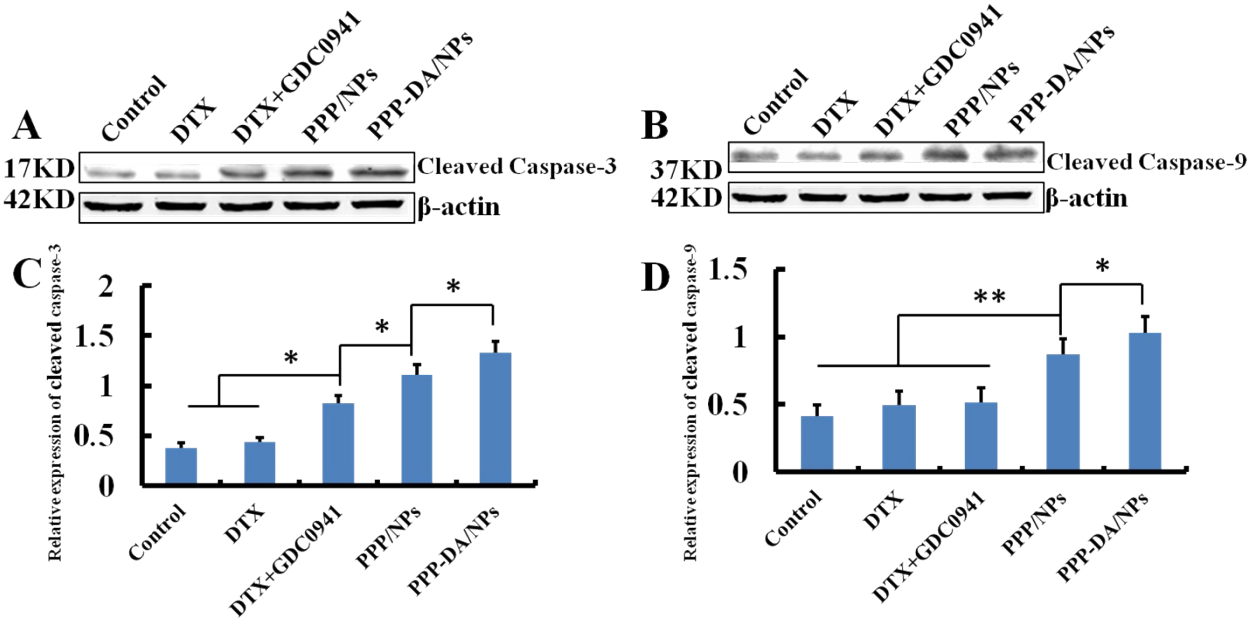

Figure S7. The antitumor mechanistic studies were confirmed by western bloting analysis.Cropped gels images (A, B) and semi-quantitative analysis (C, D) were performed to examine the expression of cleaved caspase-3/9 in 4T1 tumor cells. The sample were extracted from tumor cells treated with saline, DTX, DTX+GDC0941, PPP/NPs and PPP-DA/NPs. *$P < 0.05$, **$P < 0.01$.