Rational design of Polymeric Hybrid Micelles To Overcome Lymphatic And Intracellular Delivery Barriers In Cancer Immunotherapy

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SUPPLEMENTARY TABLES AND FIGURES

Table S1. The composition of various PHMs with different weight ratio of PCL-PEI to PCL-PEG.

	Trp2/PHM-0/CpG	Trp2/PHM-5/CpG	Trp2/PHM-10/CpG	Trp2/PHM-25/CpG	Trp2/PHM-50/CpG
PCL-PEG	100	95	90	75	50
PCL-PEI	0	5	10	25	50

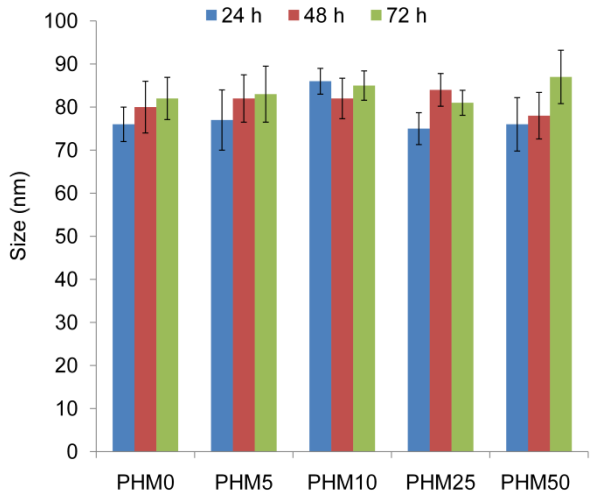

Figure S1. The stability of various Trp2/PHM/CpG nanoparticle after storage at 4 °C for 72 h.

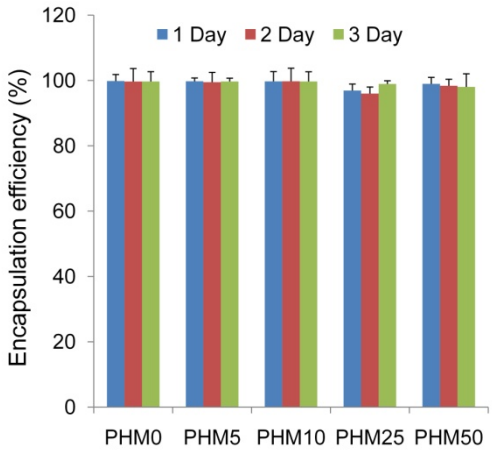

Figure S2. The encapsulation efficiency of various Trp2/PHM/CpG nanoparticle after storage at 4 °C for 72 h.

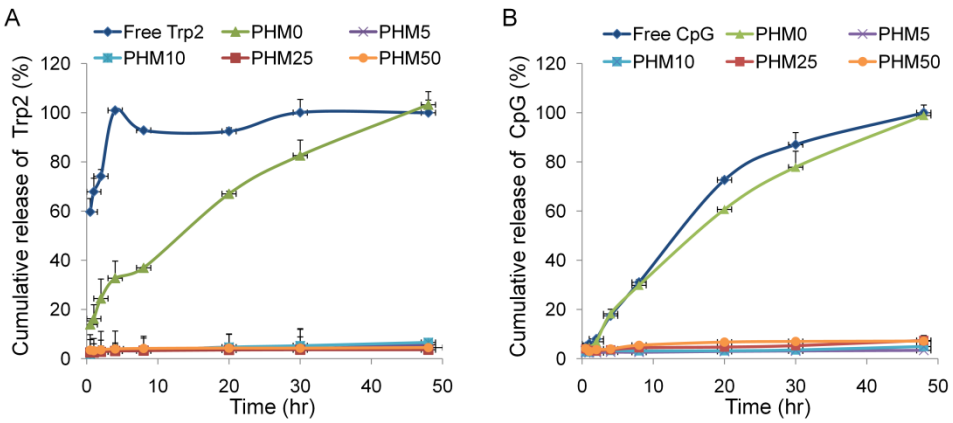

Figure S3 . Release profiles of Trp2 (A) and CpG (B) from various Trp2/PHM/CpG formulation in PBS (PH=7.4).

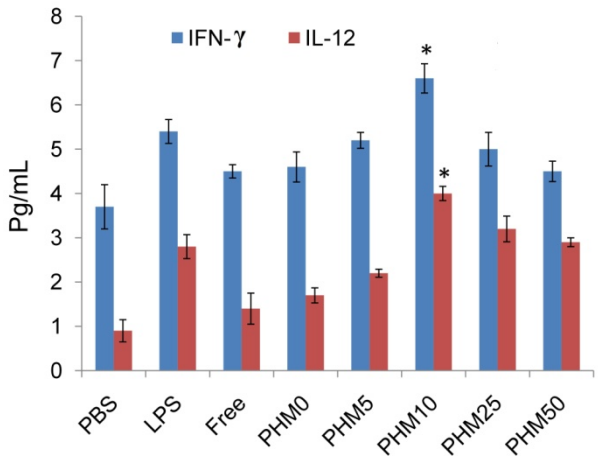

Figure S4. Secretion levels of IFN-γ and IL-12 from BMDCs after treated by various Trp2/PHM/CpG formulations. Cells were treated with PHM formulations at 37 °C for 24 h. The concentrations of IFN-γ and IL-12 were measured by ELISA. Results are shown as mean ± SD (n = 5). Statistical comparisons were made relative to PBS. *P <0.05.

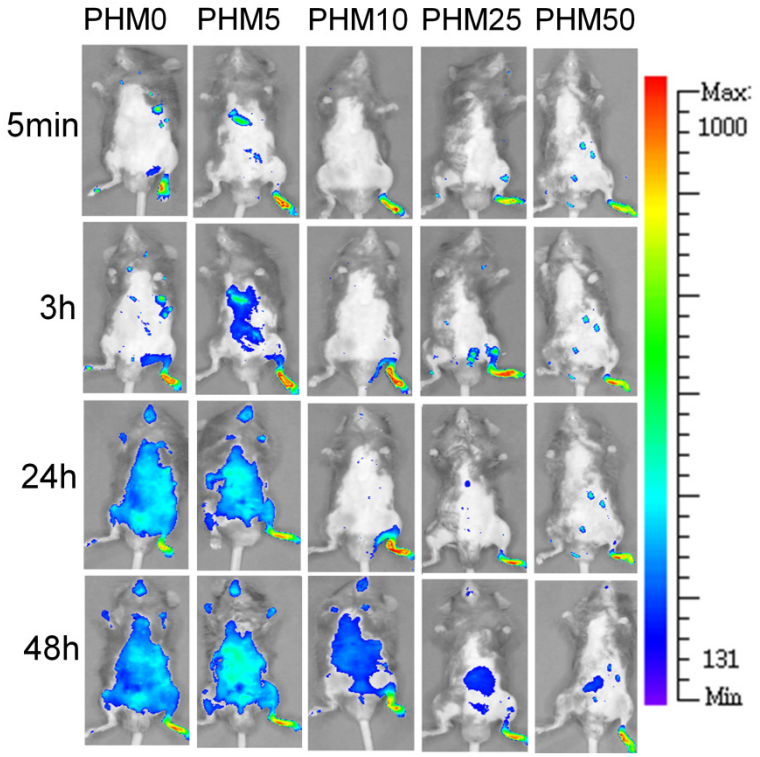

Figure S5. Whole-body imaging of mice at 5 min, 3 h, 24 h and 48 h after subcutanous injection.

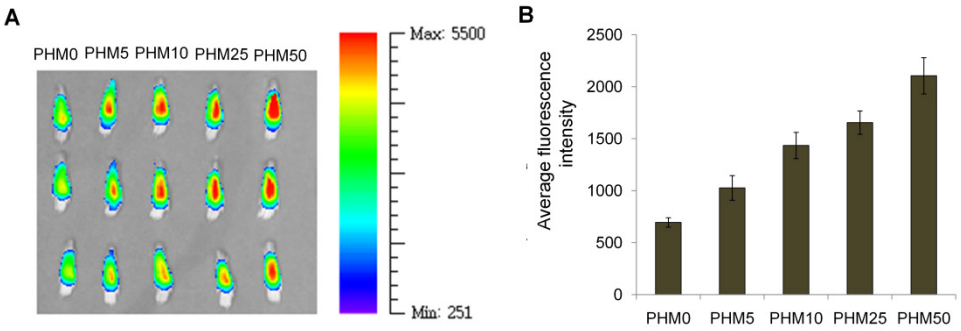

Figure S6. The retarding of DiD in the injected foot pad. **(A)** *Ex vivo* imaging of the injected foot pad after 24 h. **(B)** The average fluorescence intensity for the DiD retarding in the injected foot pad after 24 h.

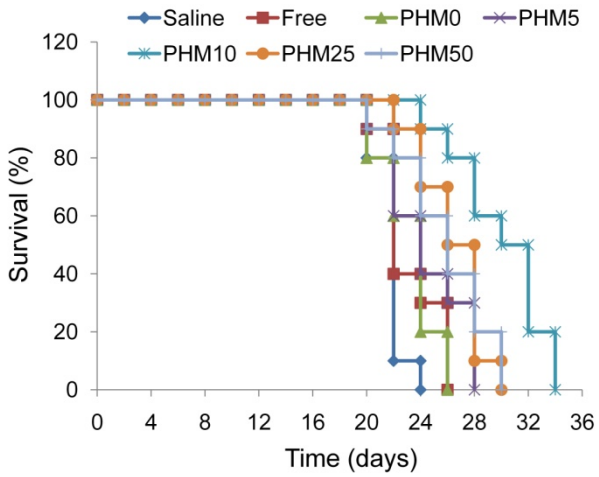

Figure S7. Survival analysis of mice bearing B16F10 tumors. C57BL/6 mice were inoculated with B16F10 cells (1×10^5) subcutaneously on day 0. Animals were vaccinated with saline, Trp2/CpG, Trp2/PHM0/CpG, Trp2/PHM5/CpG, Trp2/PHM10/CpG, Trp2/PHM25/CpG or Trp2/PHM50/CpG (16 μg Trp2, 1.6 μg CpG) on days 4, 11 and 18. Dates of the animal death were recorded every 2 days to draw the survival curve (n=10).

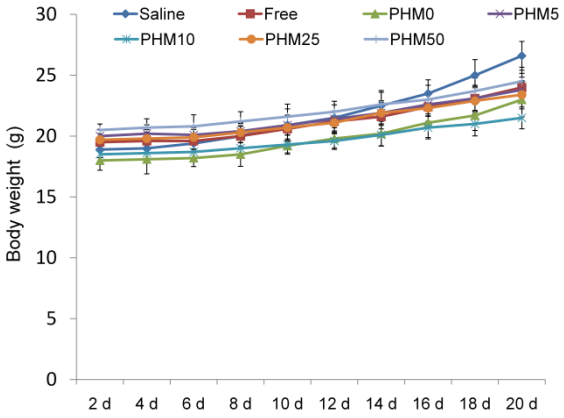

Figure S8. Body weight of mice bearing B16F10 subcutaneous tumor during the vaccination therapy with saline, Trp2/CpG, Trp2/PHM-0/CpG, Trp2/PHM-5/CpG, Trp2/PHM-10/CpG, Trp2/PHM-25/CpG and Trp2/PHM-50/CpG. Body weight were measured every 2days.