Supporting Information

Hot-Band Absorption Assisted Single-Photon Frequency Upconversion Luminescent Nanophotosensitizer for 808 nm Light Triggered Photodynamic Immunotherapy of Cancer

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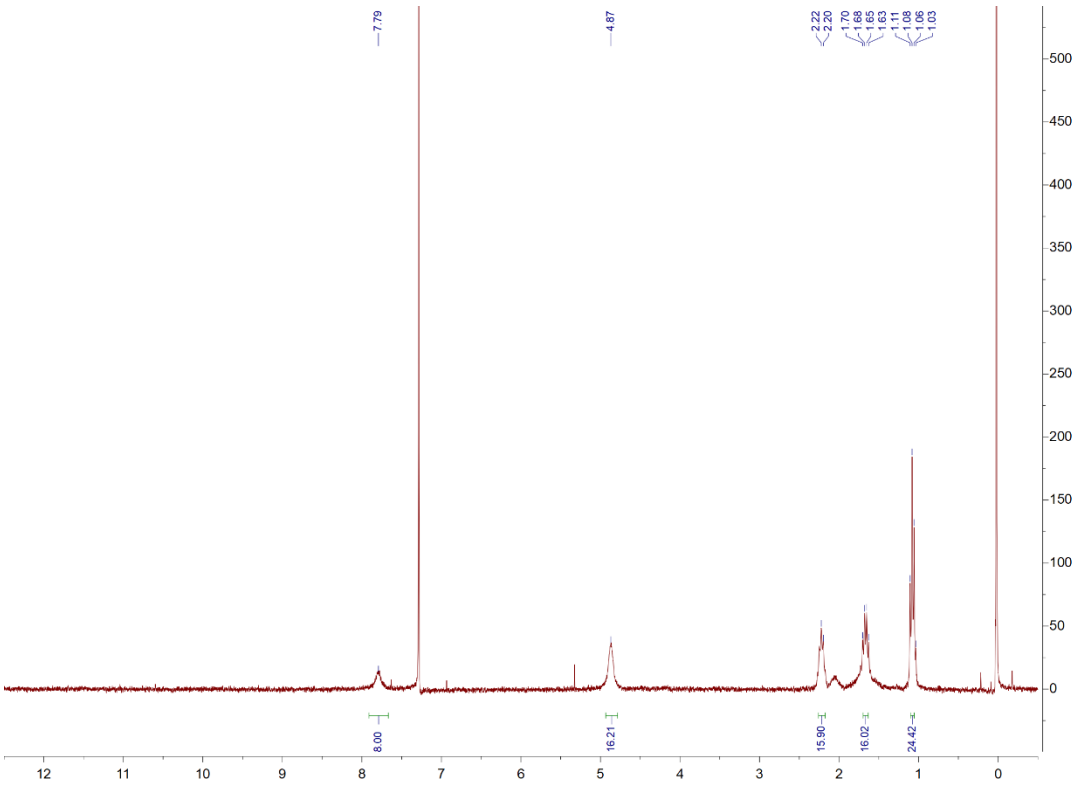

Fig. S1 The ^{1}H NMR spectrum of compound $\mathbf{H_2Pc(OBu)_8}$.

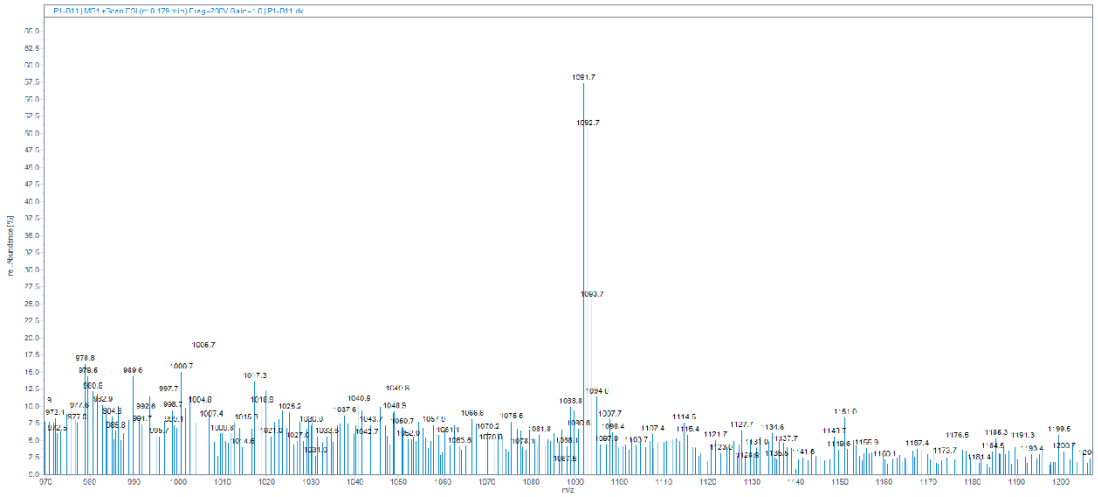

Fig. S2 Mass spectra of compound **$H_2Pc(OBu)_8$**.

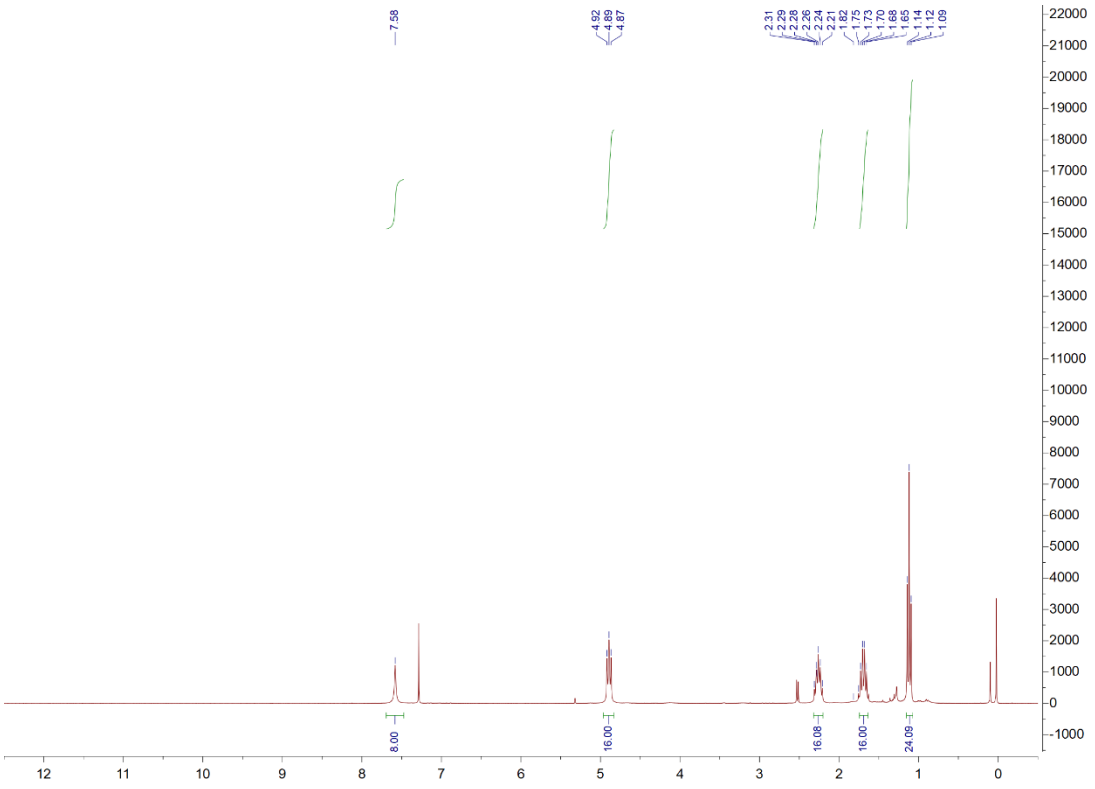

Fig. S3 The ^{1}H NMR spectrum of compound **PdPc(OBu)$_8$**.

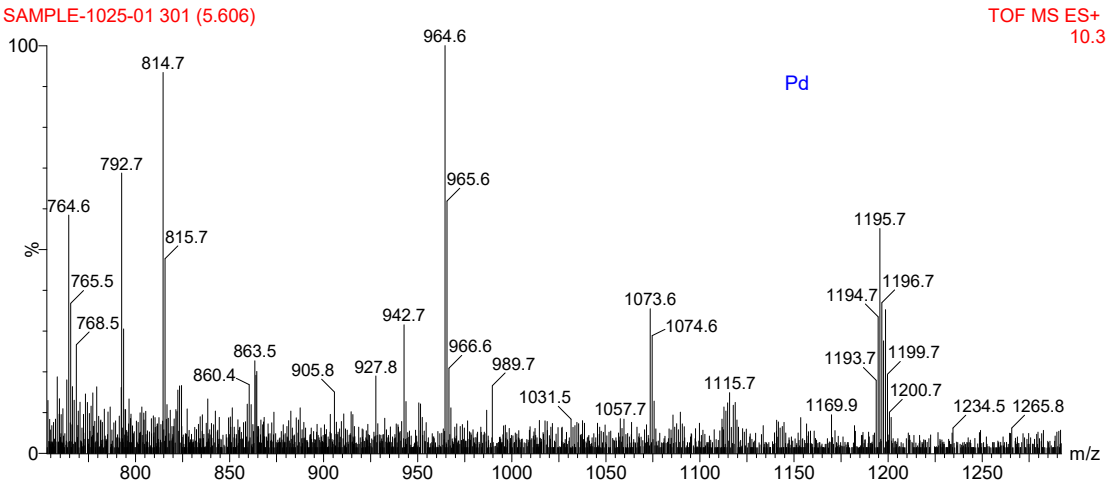

Fig. S4 Mass spectra of compound **PdPc(OBu)$_8$**.

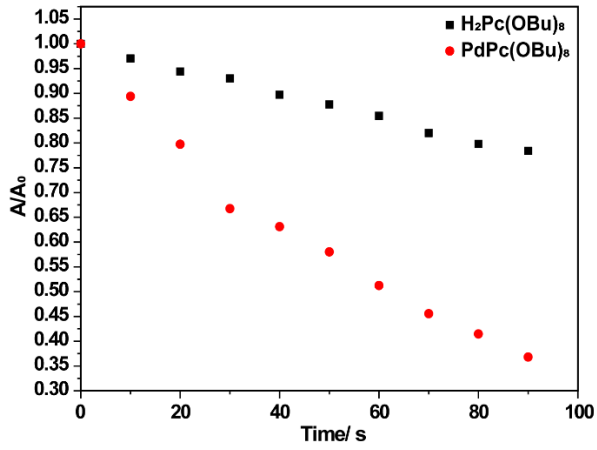

Fig. S5 The absorption change of DPBF at 410 nm after $H_2Pc(OBu)_8$ and $PdPc(OBu)_8$ under 808 nm irradiation.

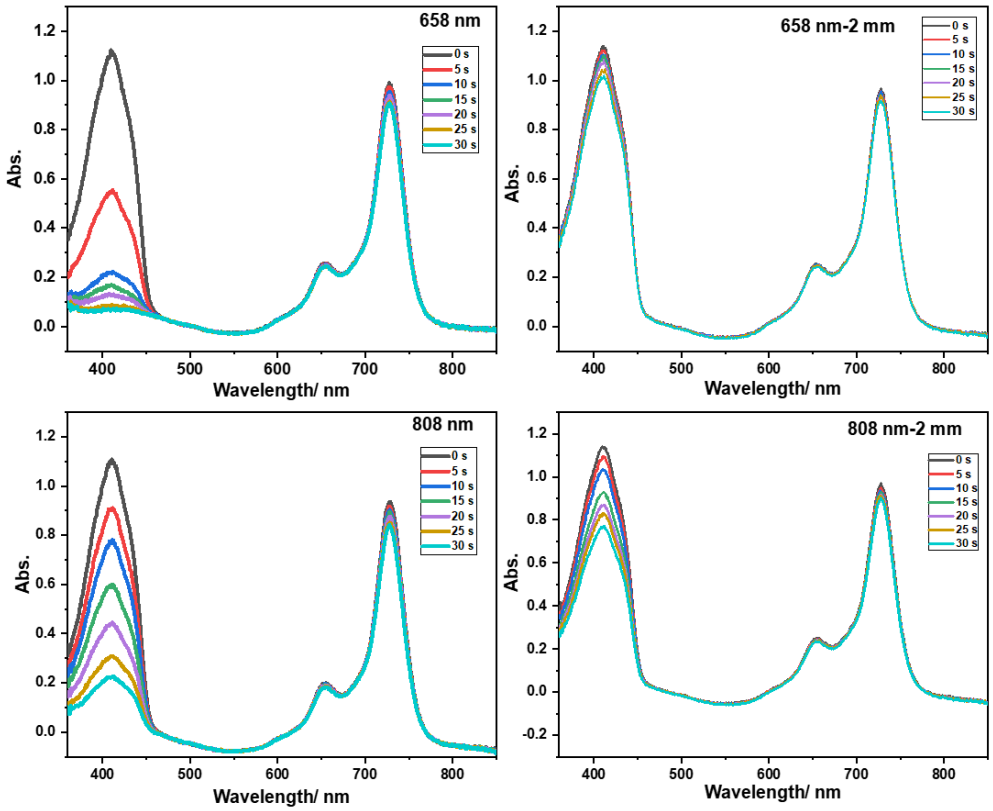

Fig. S6 The absorption change of DPBF with $PdPc(OBu)_8$ under 658 nm or 808 nm irradiation.

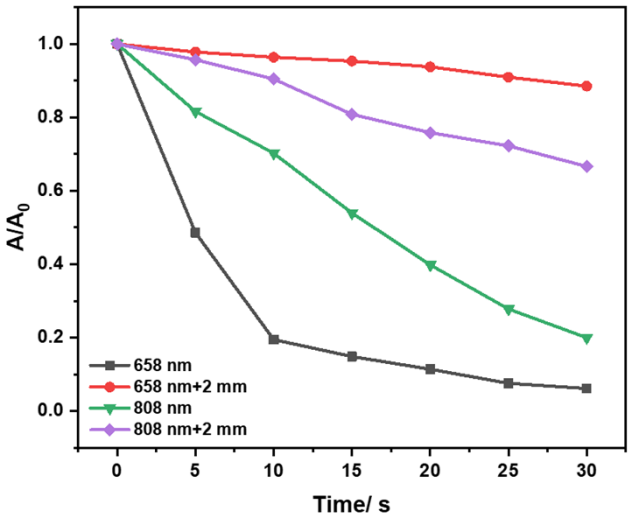

Fig. S7 The absorption change of DPBF with $PdPc(OBu)_8$ at 410 nm under 658 nm or 808 nm irradiation.

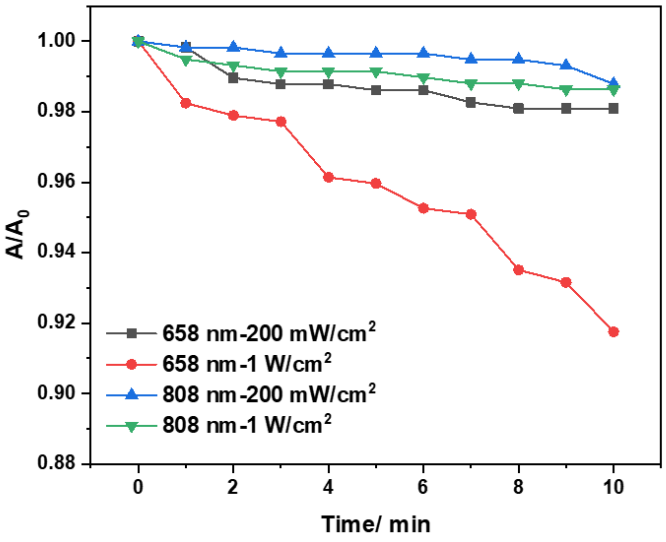

Fig. S8 The photostability of $PdPc(OBu)_8$ under 658 nm or 808 nm irradiation.

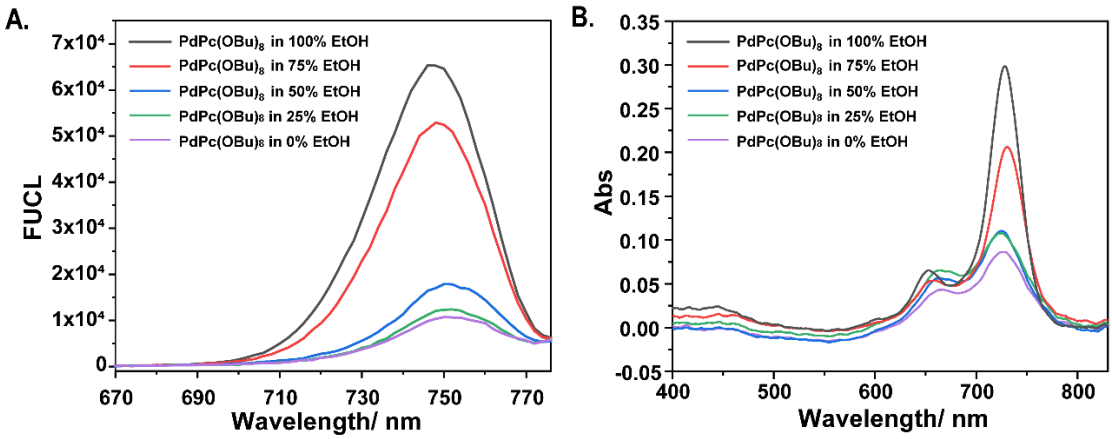

Fig. S9 FUCL emission spectra (Ex= 808 nm) and absorption spectra of $PdPc(OBu)_8$ in different proportions of ethanol-water solutions.

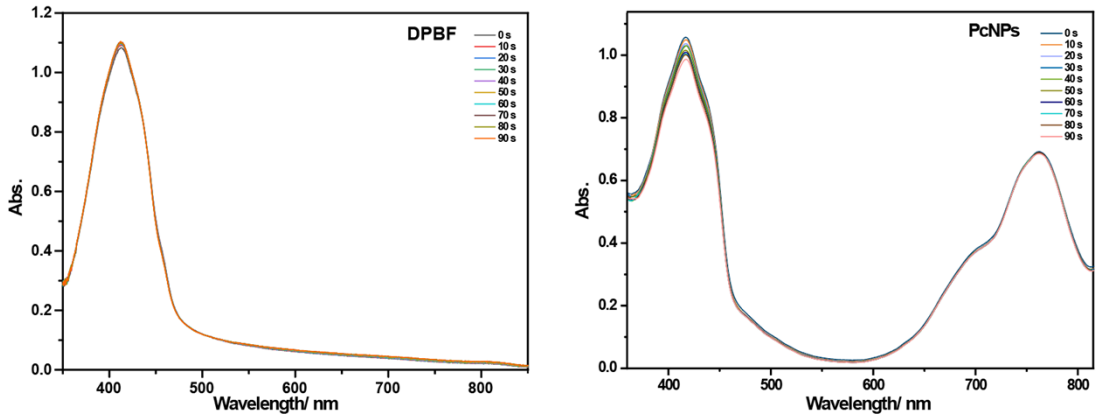

Fig. S10 The absorption changes of DPBF or DPBF with PcNPs under 808 nm irradiation.

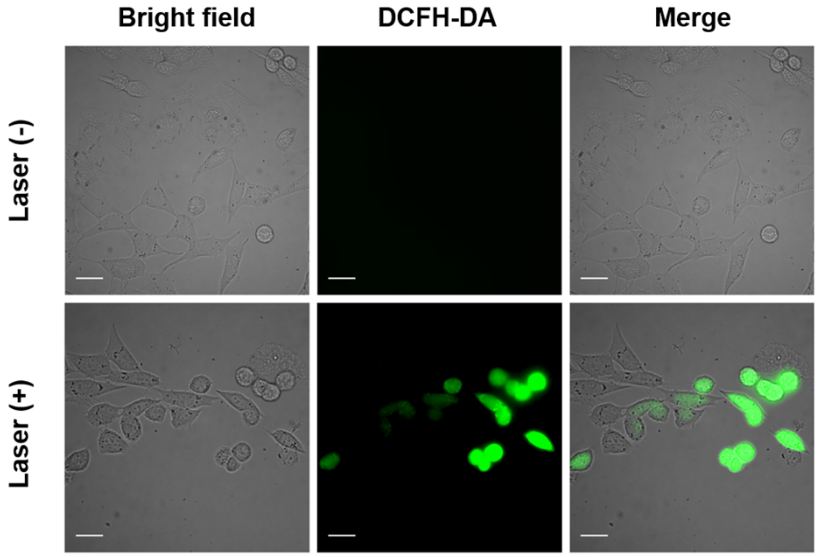

Fig. S11 The ROS detection in U87MG cells incubated with PdPc NPs with different treatments.

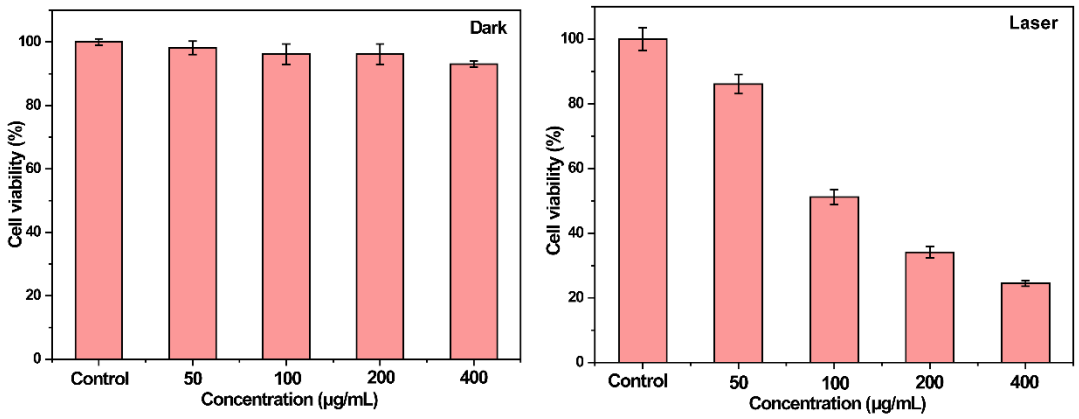

Fig. S12 Cell viabilities of U87MG cells incubated with PdPc NPs at various concentrations.

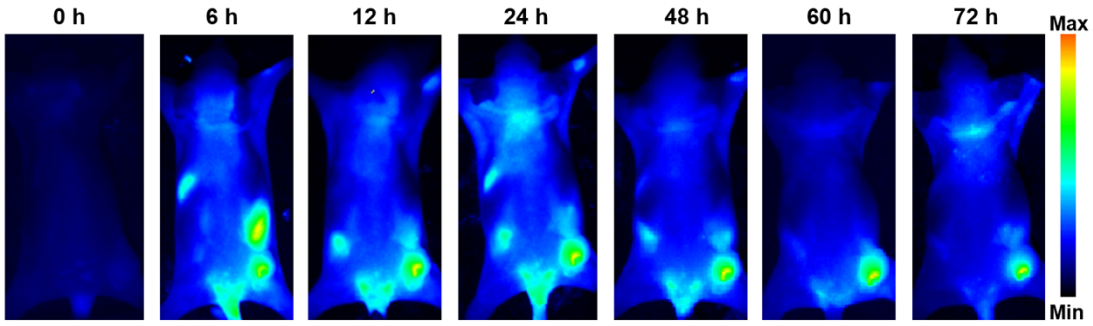

Fig. S13 Time-dependent *in vivo* images of 4T1 tumor-bearing mice, Ex= 808 nm.

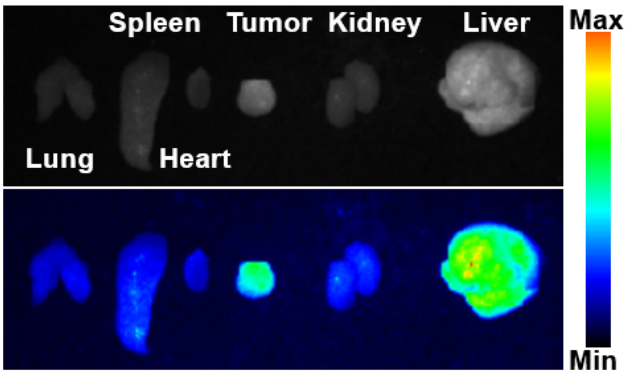

Fig. S14 E*x vivo* images of tumor and major organs harvested from 4T1 tumor-bearing mice sacrificed at 24 h.

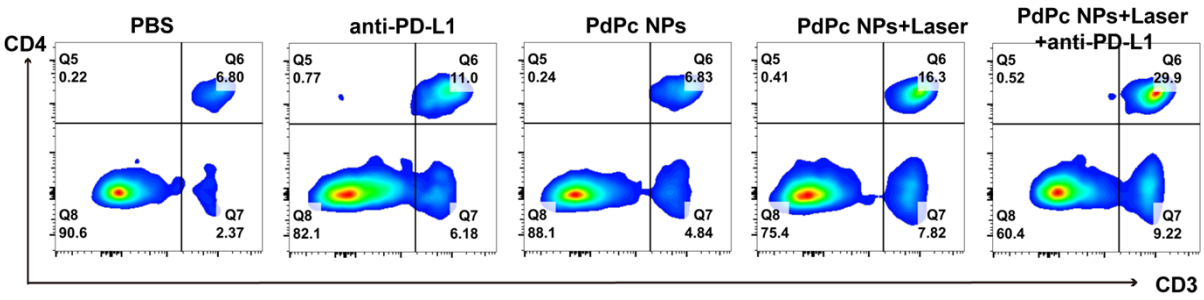

Fig. S15 Flow cytometric of the intratumor infiltration of cytotoxic T lymphocytes (CTLs) (CD3+CD4+) (n = 3).