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Rapid fluorescence detection of hypoxic microenvironment by nitro-benzyl conjugated chitosan nanoparticles encapsulating hydrophobic fluorophores †

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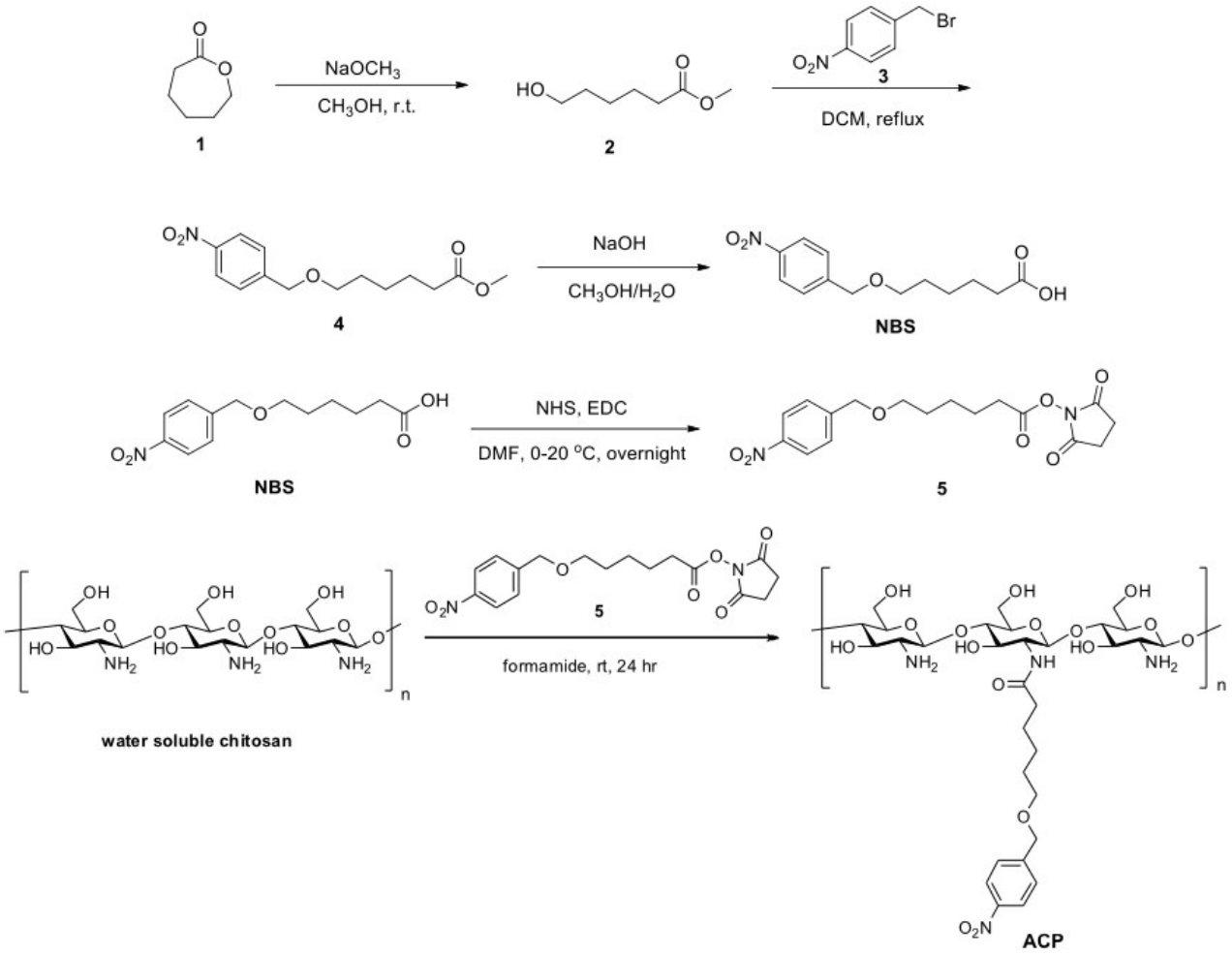

Scheme S1 Synthetic route of amphiphilic chitosan polymer (**ACP**).

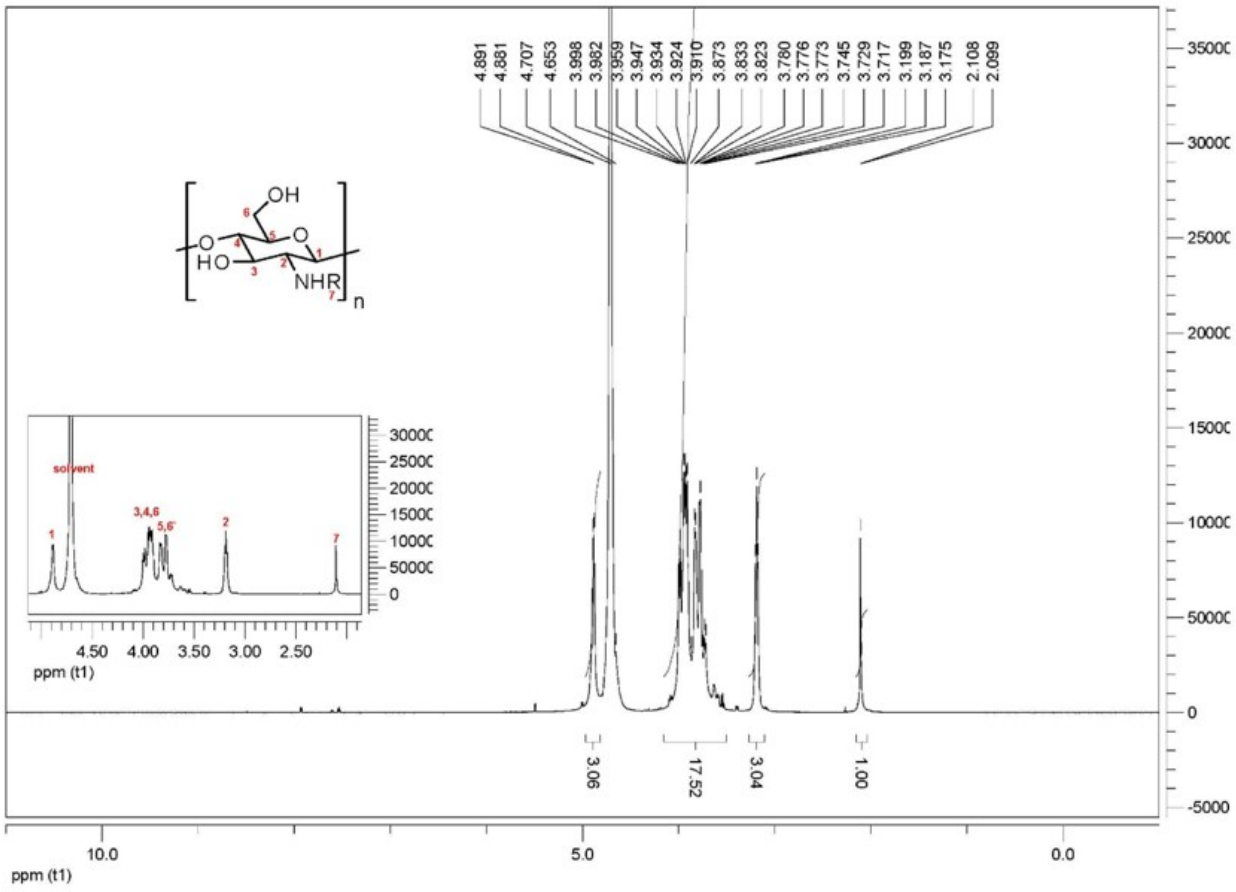

Fig. S1 ^{1}H NMR spectrum of water-soluble chitosan in D_2O.

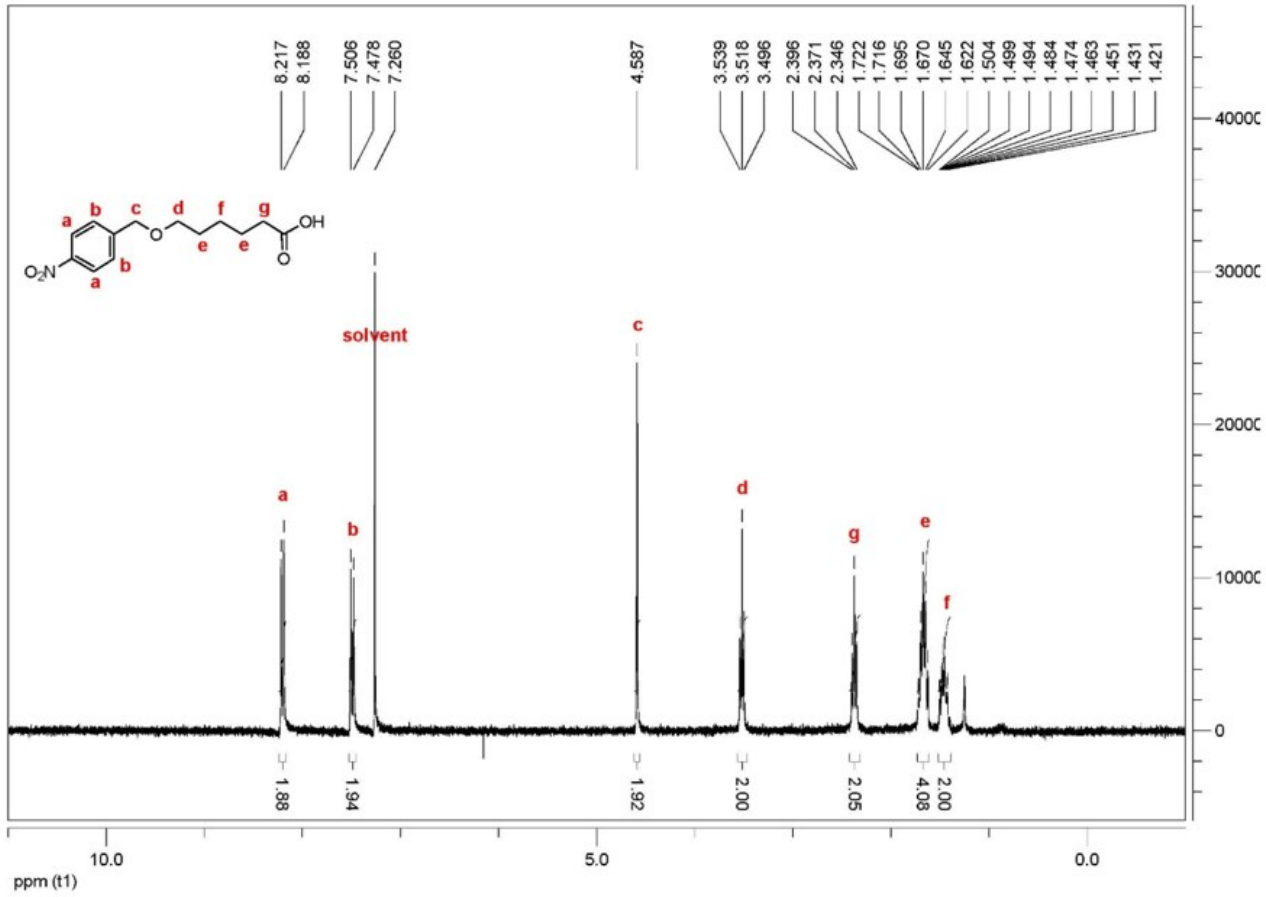

Fig. S2 ^{1}H NMR spectrum of nitro-benzyl substrate (**NBS**) in $CDCl_3$.

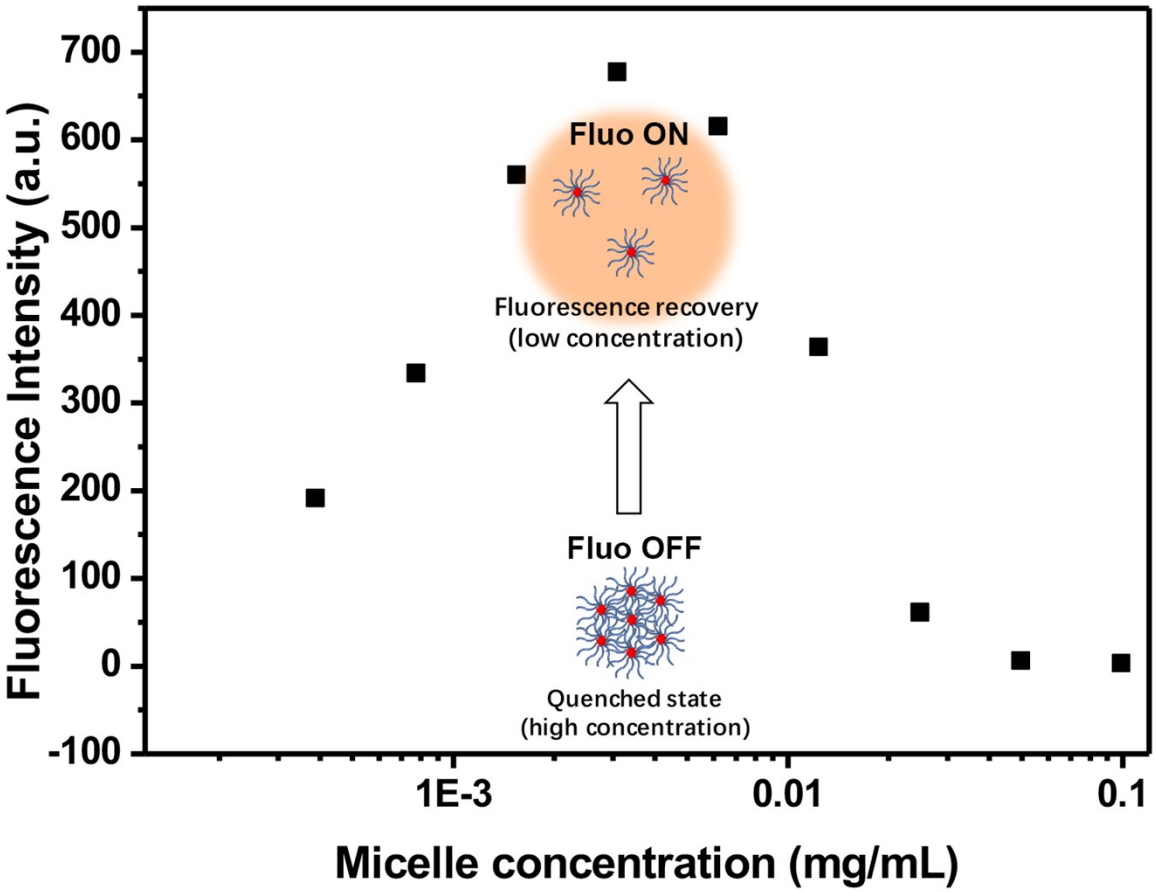

Fig. S3 Fluorescence intensity of HRCN-R6G with micelle concentration

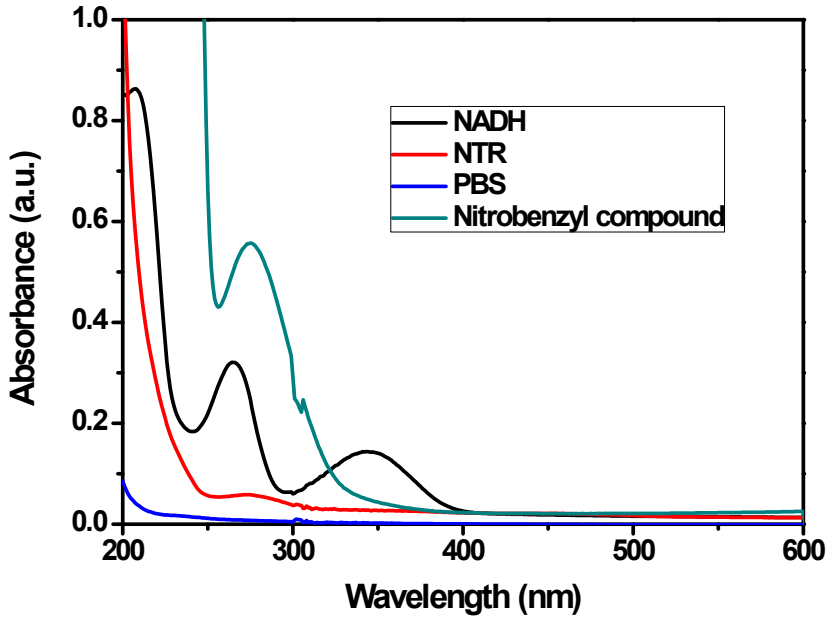

Fig.S4 UV absorption spectra of PBS, NADH, NTR, and nitrobenzyl compound.

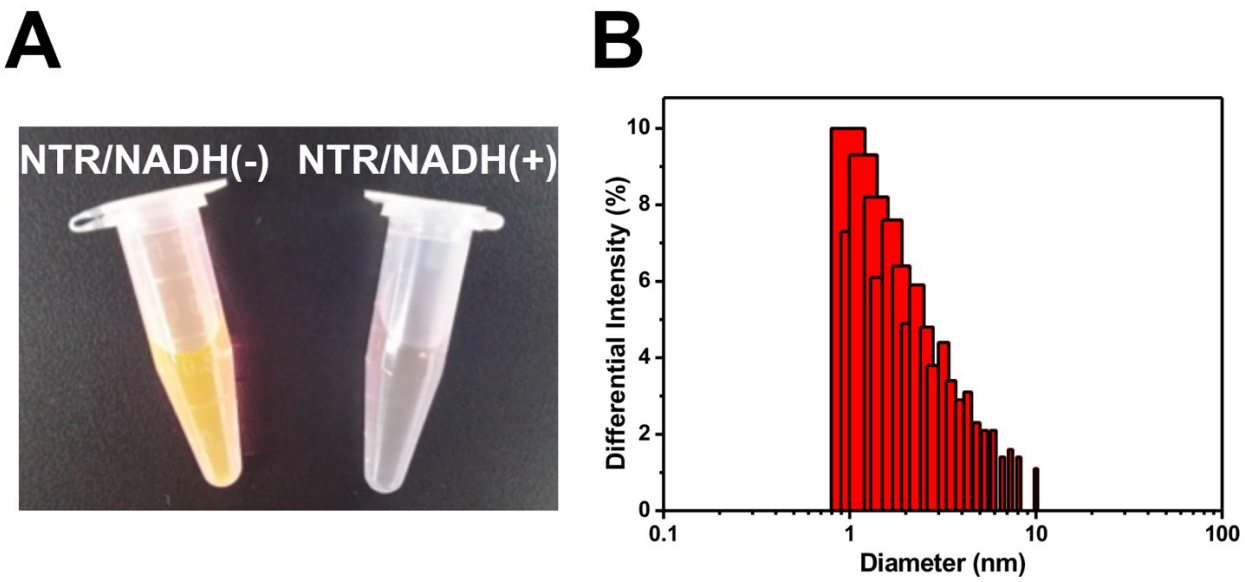

Fig. S5 (A) Photographs of HRCN-R6G without (left) and with (right) NTR/NADH. (B) Size distribution of HRCN-R6G after treating with NTR/NADH.

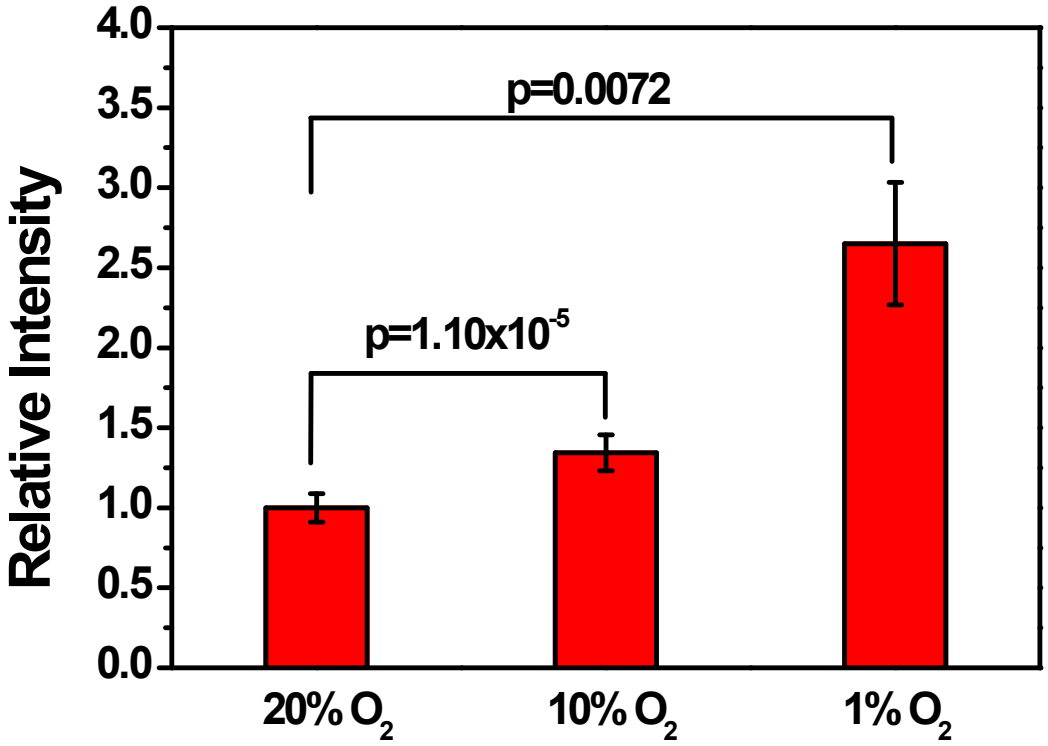

Fig. S6 Mean FI after incubation under normoxia and hypoxia (10% O_2 and 1% O_2) condition for 30 mins. T tests were used to determine the significance between normoxia & hypoxia groups.