

Supporting Information

Functionalization of Quantum Dots with Multidentate Zwitterionic Ligands: Impact on Cellular Interaction and Cytotoxicity

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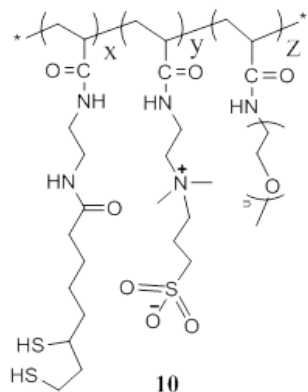


Fig. S1 Chemical structure of polymer ligand **10**.

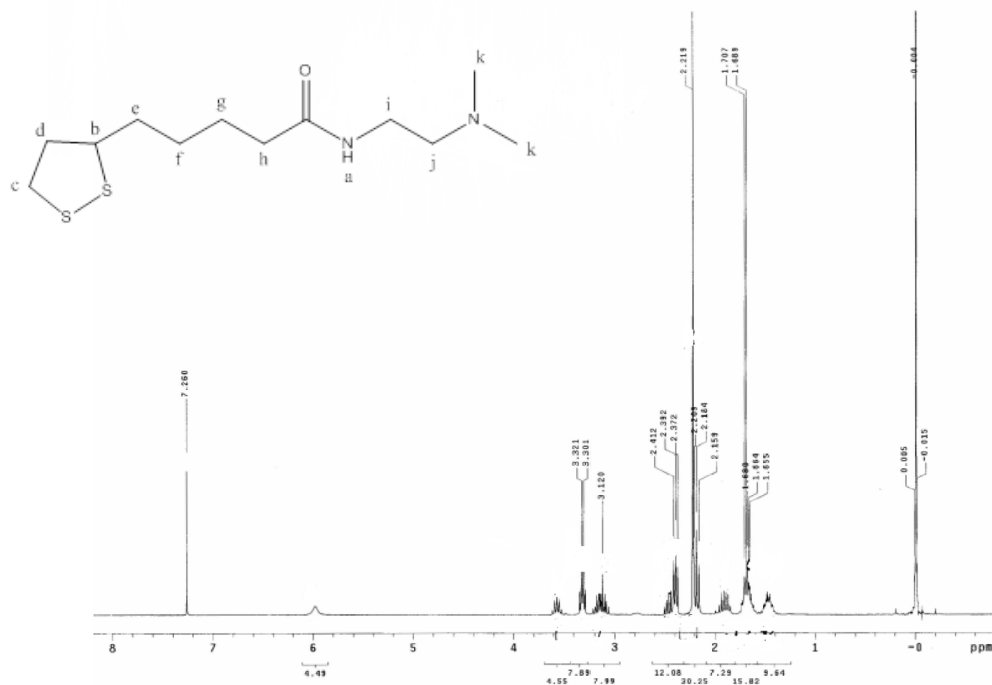


Fig. S2 ¹H NMR of model compound LA-DMEDA.

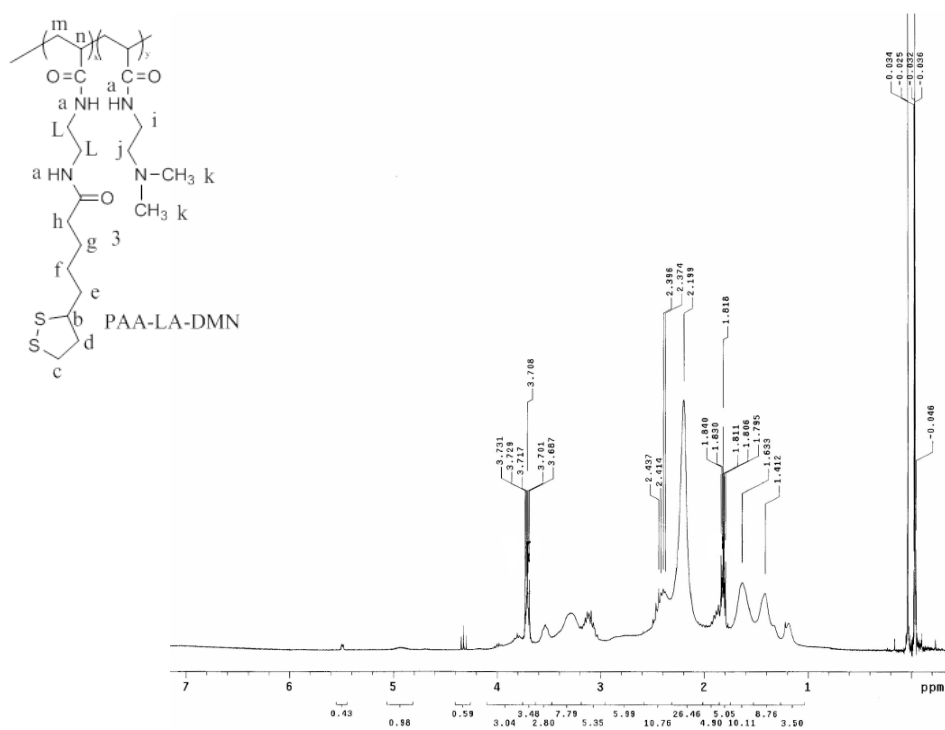


Fig. S3 ¹H NMR of polymer **3c** (x/y=1/1).

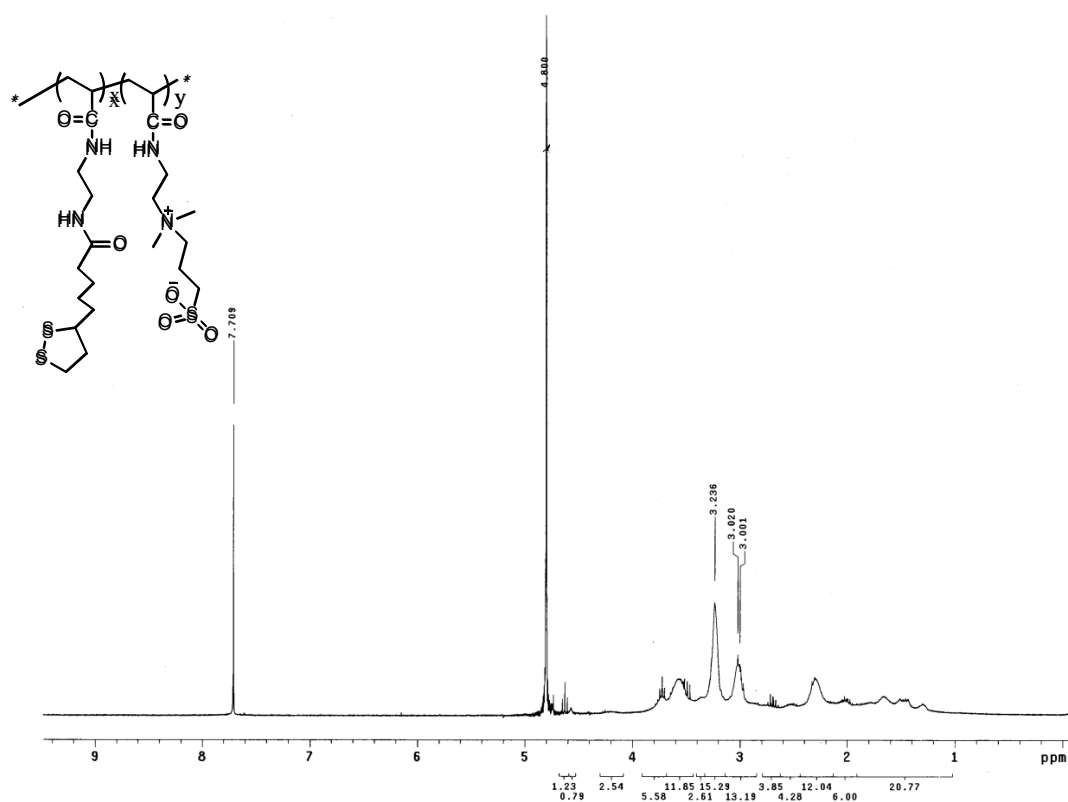


Fig. S4 ¹H NMR of polymer **4c** (x/y=1/1).

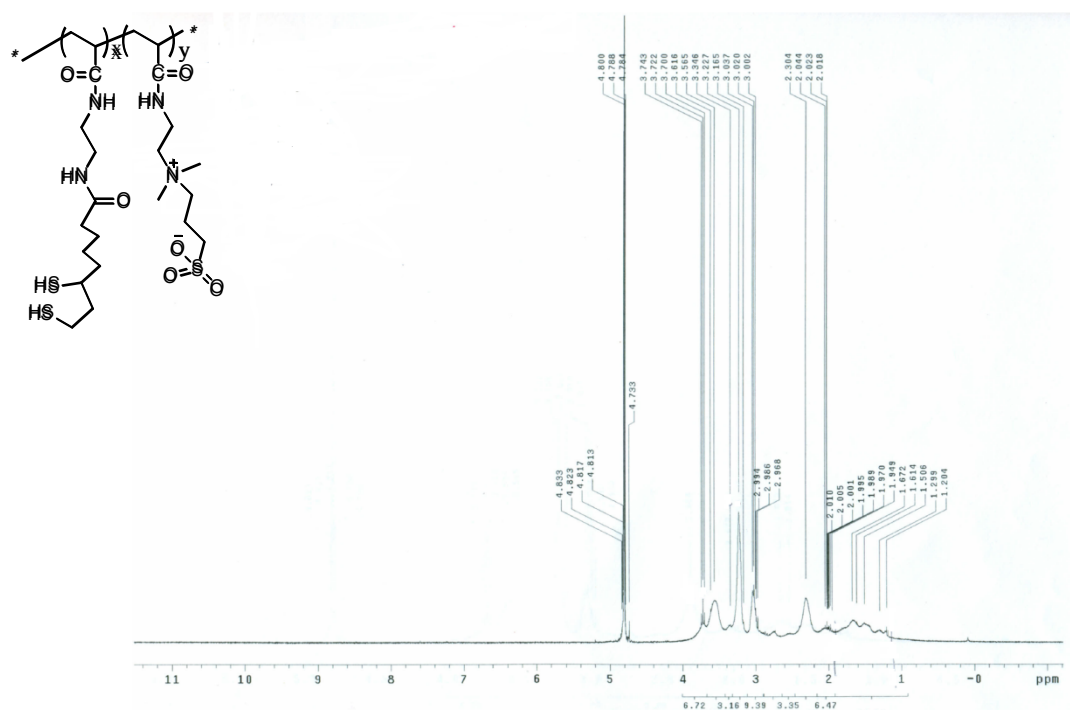


Fig. S5 ^1H NMR of polymer **5c** ($x/y=1/1$).

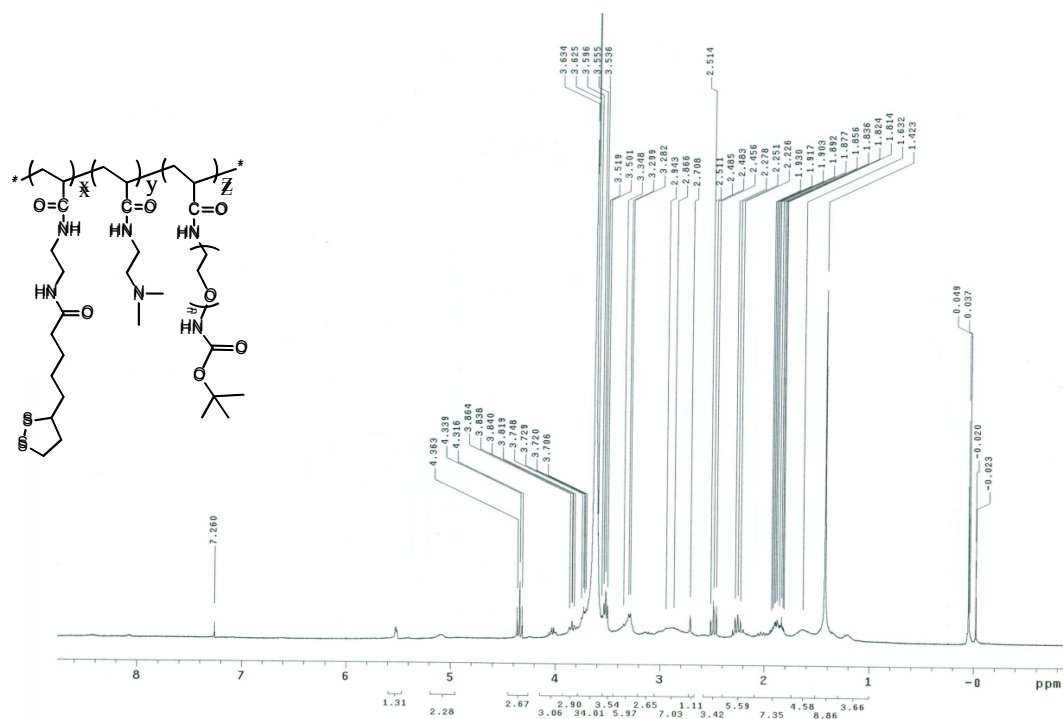


Fig. S6 ^1H NMR of polymer **7** ($x/y/z=5/3/2$).

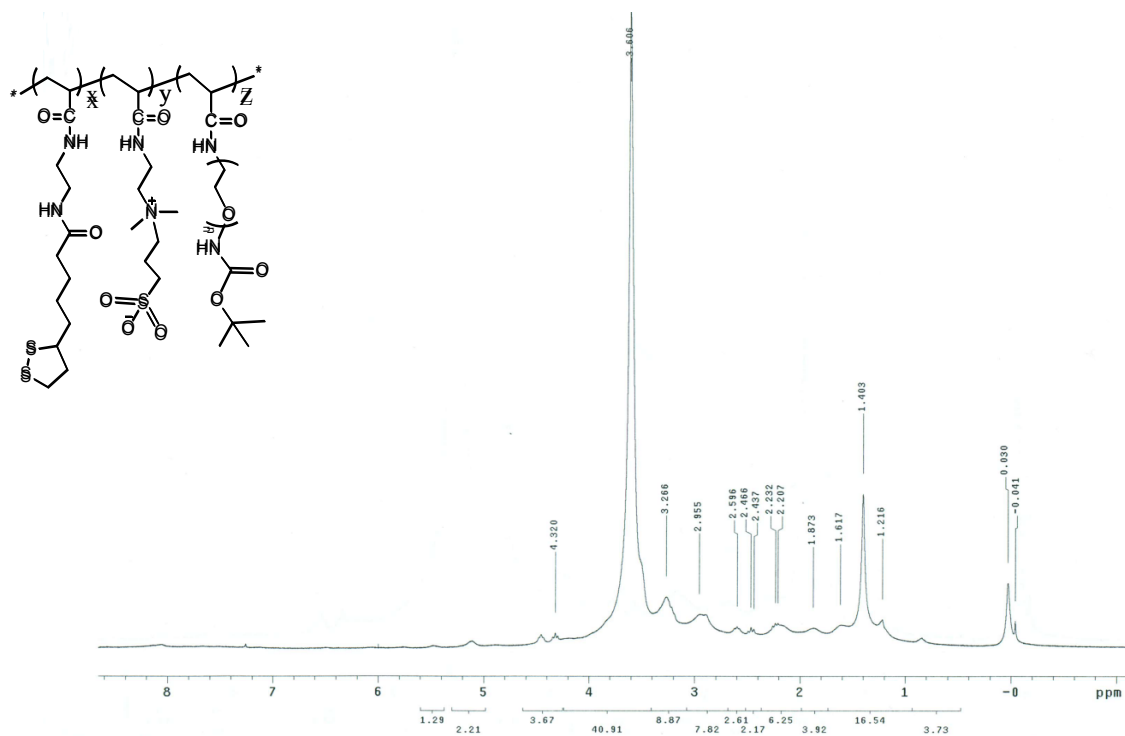


Fig. S7 ^1H NMR of polymer **8** ($x/y/z=5/3/2$).

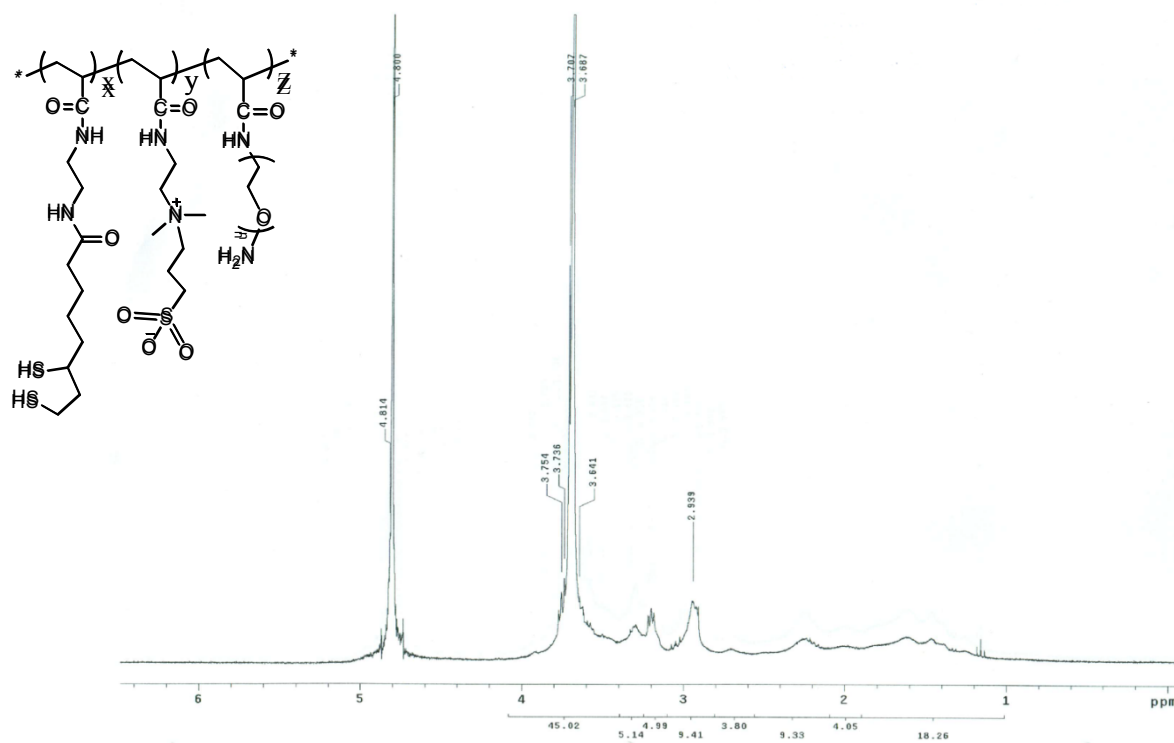


Fig. S8 ^1H NMR of polymer **9** ($x/y/z=5/3/2$).

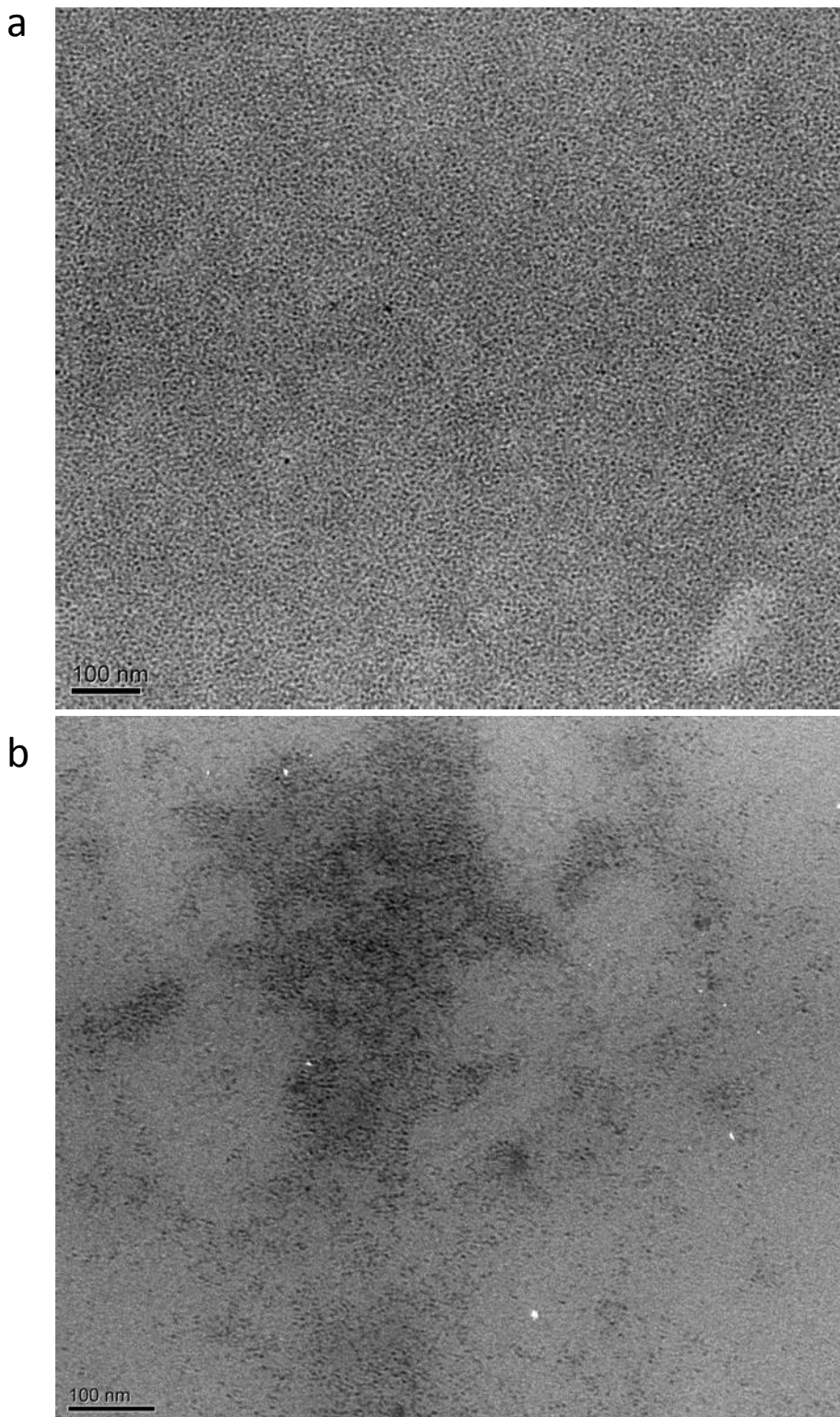


Fig. S9 TEM of CdSe/ZnS QDs before (a) and after (b) modification with multidentate zwitterionic ligands.

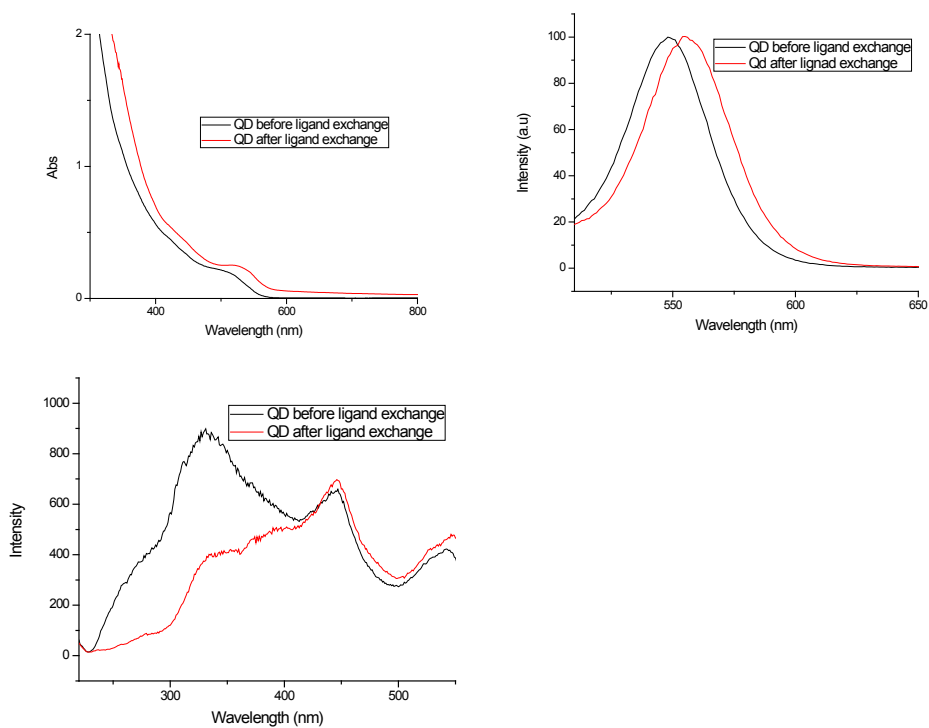
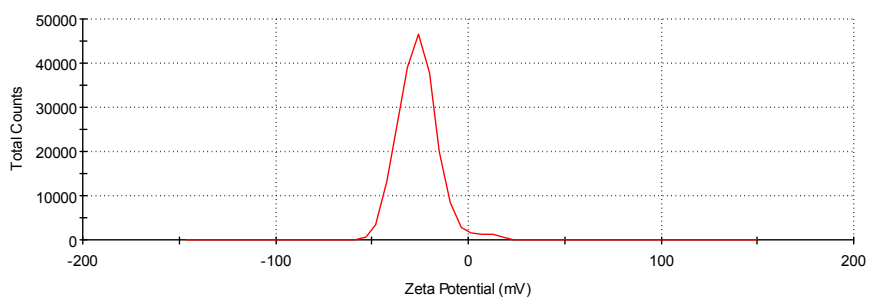
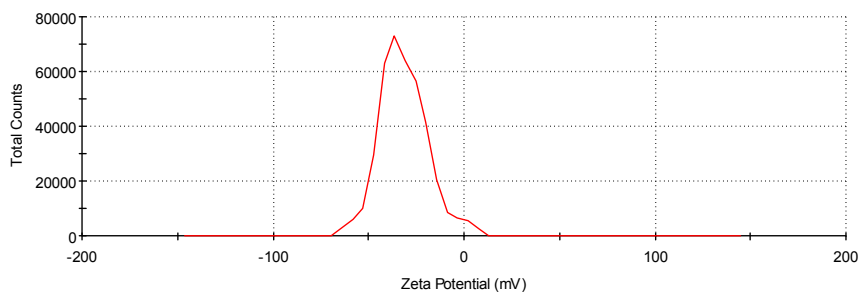


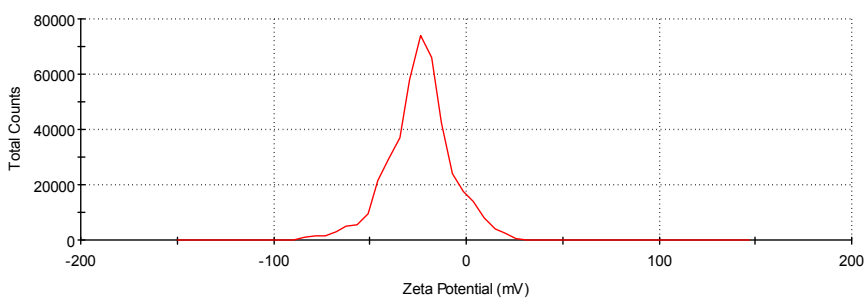
Fig. S10 Absorption (a), emission (b) and excitation (c) spectra of QDs before (in CHCl_3) and after ligand exchange (in H_2O).



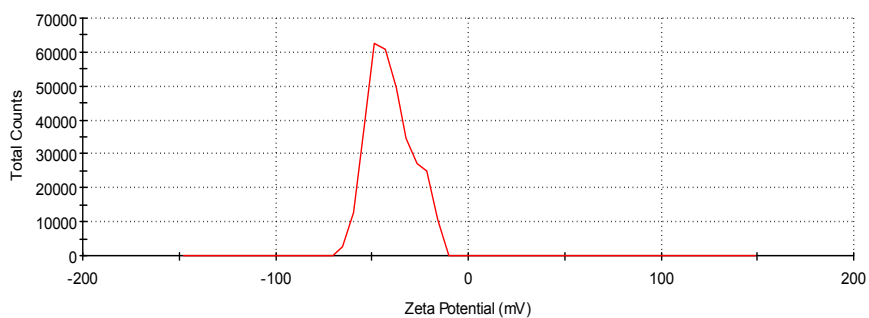
QD-a: -25.9 mV



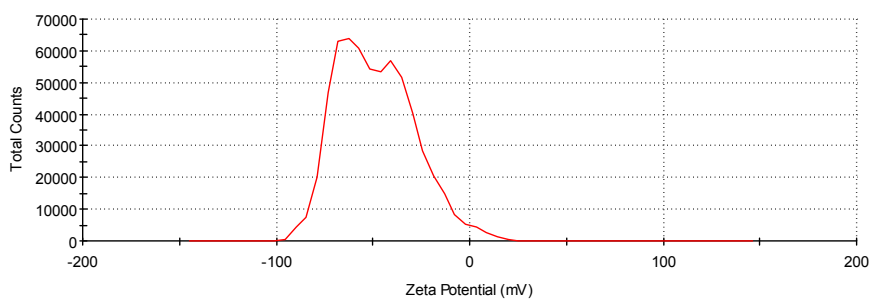
QD-b: -31.6 mV



QD-c: -30.6 mV



QD-d: -40.4 mV



QD-e: -54.8 mV

Fig. S11 Zeta potentials of QD-a to QD-e.

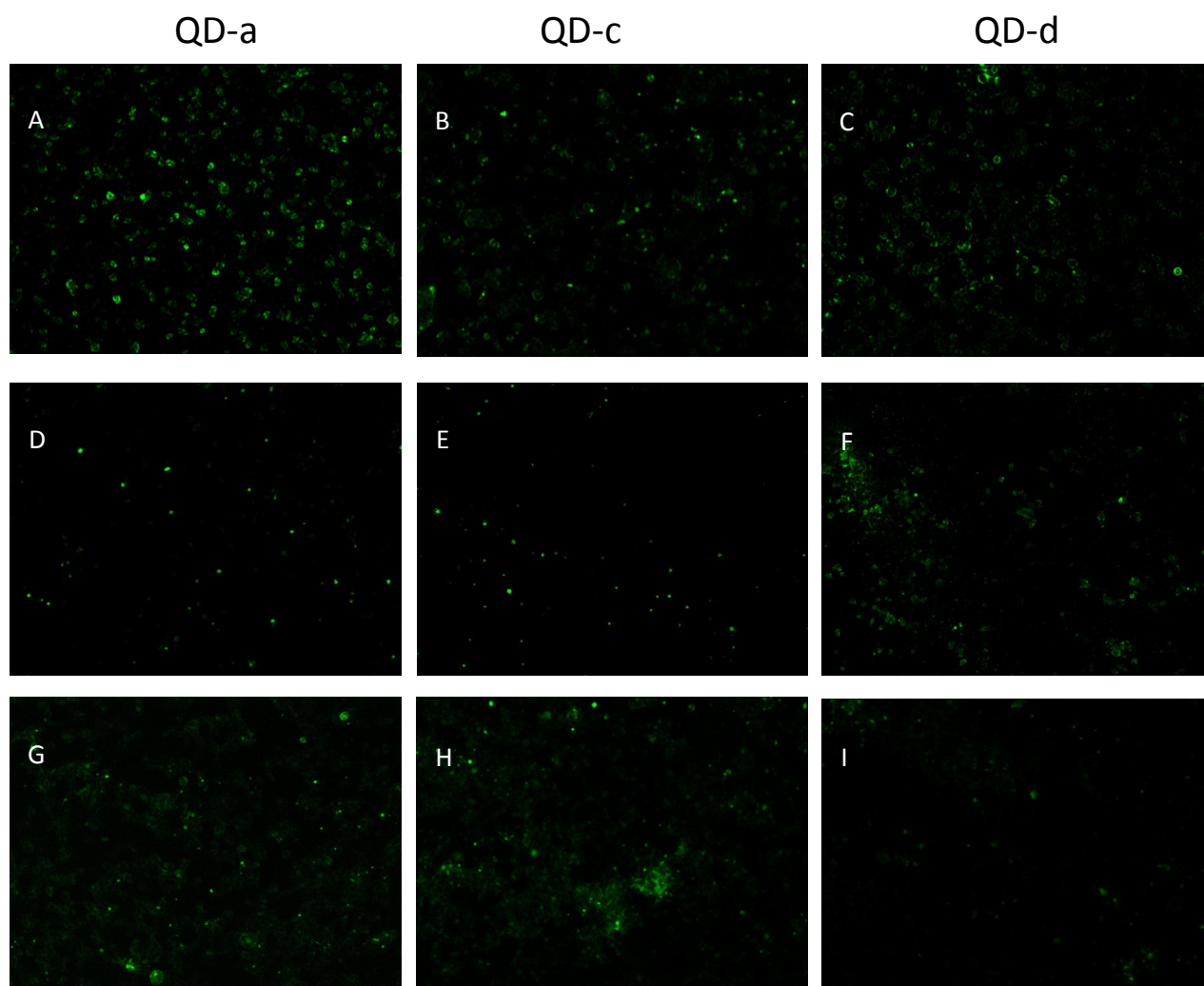


Fig. S12 Fluorescent microscopy of COLO 205, KB 3-1, and HEK 293 cell lines incubated with QD-a, QD-c and QD-d at 50 nM for 4 hrs. (A) COLO 205-QD-a; (B) COLO 205-QD-c; (C) COLO 205-QD-d, (D) KB 3-1-QD-a; (E) KB 3-1-QD-c; (F) KB 3-1-QD-d, (G) HEK 293-QD-a; (H) HEK 293-QD-c; (I) HEK 293-QD-d.

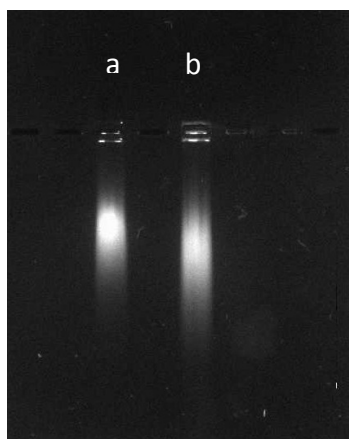


Fig. S13 Gel electrophoresis of cRGD-QD-9 before (a) and after (b) incubating with mouse plasma.

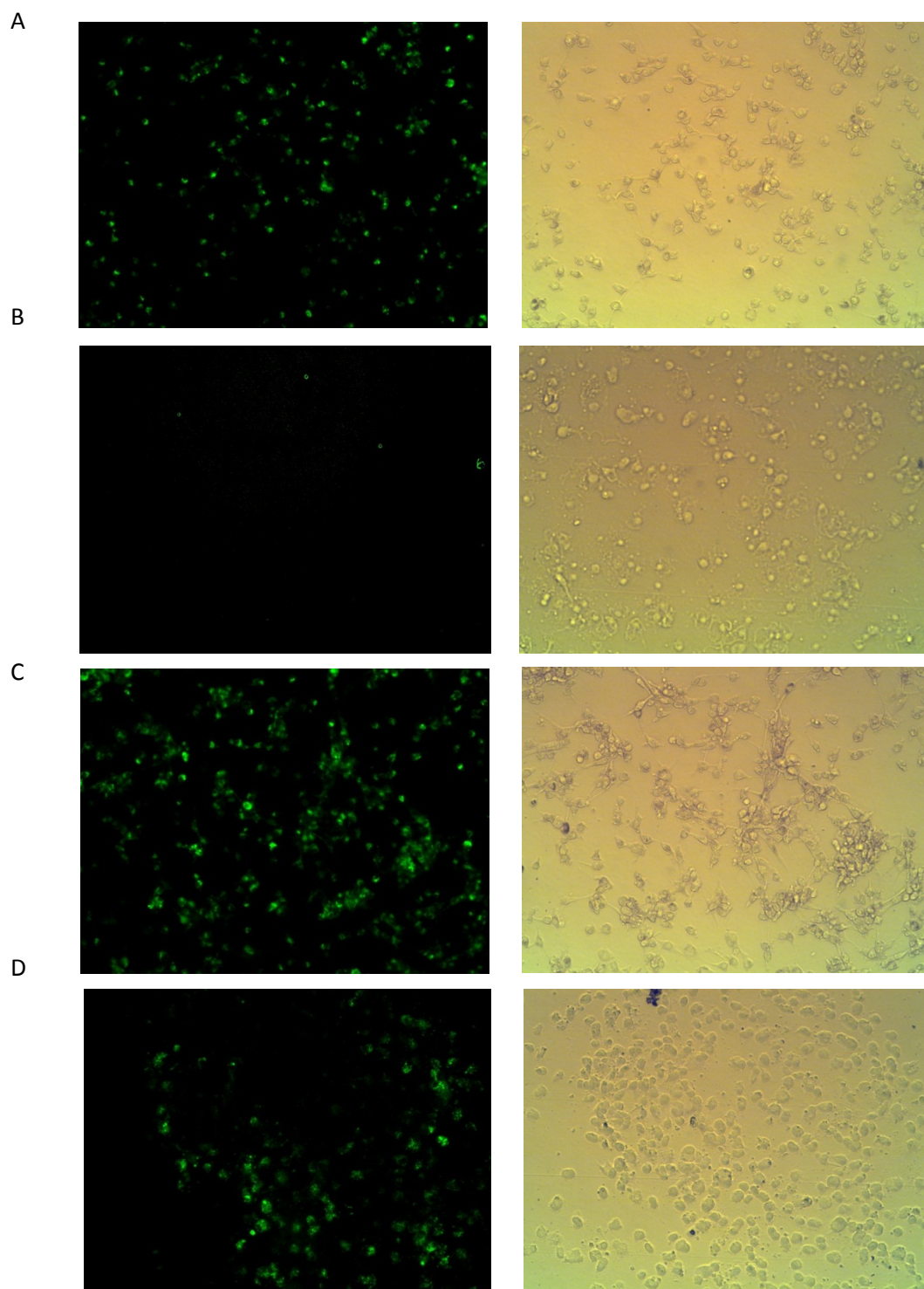


Fig. S14 Fluorescent microscopy of U87MG incubated (1 hr) with cRGD-QD-9 (A) without or (B) with free cRGD blocking (left) and relevant bright field images (right). Fluorescent microscopy of U87MG incubated (4 hrs) with cRGD-QD-9 (C) without or (D) with free RGD blocking (left) and relative bright field images (right).