Supporting Information

Multi-functional quantum dot-polypeptide hybrid nanogel for targeted imaging and drug delivery

Jie Yang, Ming-Hao Yao, Lang Wen, Ji-Tao Song, Ming-Zhen Zhang, Yuan-Di Zhao*, Bo Liu*

Britton Chance Center for Biomedical Photonics at Wuhan National Laboratory for Optoelectronics
– Hubei Bioinformatics & Molecular Imaging Key Laboratory, Department of Biomedical Engineering, College of Life Science and Technology, Huazhong University of Science and Technology, Wuhan 430074, P. R. China

*Co-corresponding author.
Tel.: +86 27 87792235; Fax: +86 27 87792202; Email: zydi@mail.hust.edu.cn (Y.-D. Zhao), lbyang@mail.hust.edu.cn (B. Liu)
Fig. S1 SDS-PAGE of PC<sub>10</sub>ARGD (lane 1), PC<sub>10</sub>A (lane 2), and P (lane 3).

Fig. S2 Unstained TEM images of GSH-capped CdSe-ZnS QDs (a) and QD-PC<sub>10</sub>A nanogel (b)
Fig. S3 Electropherograms obtained from the QD-PC$_{10}$ARGD (A) and encapsulated dye (B) channel. Sample: 5×10$^{-7}$ M QD-PC$_{10}$ARGD. Coated capillary with 36 cm effective (60 cm total) length and 75 µm I.D. was used. 25 mM Na$_2$B$_4$O$_7$ (pH 9.2) was used as running buffer. Applied voltage was 18 kV, and hydrodynamic injection was carried out by siphoning at 13 cm height for 20 s. $\lambda_{ex} = 420$ nm.

Fig. S4 Electropherograms of displacement by 1 mM and 25 mM imidazole. Other conditions were same as described in Fig. S3.
Fig. S5 Confocal fluorescence images of HeLa cells incubated with 2 nM QD-PC$_{10}$A nanogel (a) and GSH-capped QDs (b), respectively. The fluorescence channel was collected at 620 ± 10 nm. A 100× oil-immersion objective (1.40 numerical apertures) was used. Scale bars are 20 µm.