**SUPPORTING INFORMATION**

Pegylated Cationic CdSe/ZnS QDs as an Efficient Intracellular Labeling Agent

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**Figure S1.** Stability test of QDs in various buffer conditions.

Fluorescence image of (a) DHLA@QDs and (b) AET@QDs. In 10 mM glycine buffer (pH 3.0) (i), 10 mM citrate-phosphate buffer (pH 5.0) (ii), distilled water (pH ~6.5) (iii), 10 mM PBS buffer (pH 7.4) (iv), 10 mM borate buffer (pH 8.0) (v).

Fluorescence image of (c) AET@QDs, (d) DEDEA@QDs and (e) DEDEA-PEG5000 QDs (QD:PEG = 1:500). In water (pH ~6.5) (i), 10 mM HCl solution (pH 2.0) (ii), 10 mM glycine buffer (pH 4.0) (iii), 10 mM citrate-phosphate buffer (pH 5.0) (iv), 10 mM PBS buffer (pH 7.4) (v).
**Figure S2.** Fluorescence images of QDs in 50 mM borate buffer solution (pH 8.5) after 24 hrs.

DEDEA@QDs (i), DEDEA-PEG2000 QDs (QD:PEG2000, 1:50 (ii), 1:250 (iii), 1:500 (iv)), and DEDEA-PEG5000 QDs (QD:PEG5000, 1:50 (v), 1:250 (vi), 1:500 (vii)).

**Figure S3.** (a) Stability of QDs 6 in different concentration of NaCl solution and (b) fluorescence spectra in water and 1 M NaCl.
**Figure S4.** Hydrodynamic size measured by Dynamic Light Scattering (DLS)

(a) DEDEA@QD (size = 4.8 ± 1.2 nm) and (b) DEDEA-PEG5000 QDs (QD:PEG = 1:500, size = 6.2 ± 1.5 nm)

**Figure S5.** Gel image of (a) DEDEA-PEG2000 QDs (QD:PEG2000 = 1:250) and (b) DEDEA-PEG2000 QDs conjugated with oligopeptide (gly-gly-his-his-his-his-his-his).

Gel condition: 1 % agarose gel (elution buffer: 10 mM acetic acid buffer, pH 6), 50V, 30 min
**Figure S6.** Fluorescence images of HeLa cells stained by QDs

(a) QDs 6, (b) DHLA-QDs, and (c) QDs 5.

**Figure S7.** (a) Gel image and (b) Fluorescence image of EBV infected B-cells stained by QDs

(a) Gel images of DEDEA-PEG5000 QDs (QD:PEG = 1:500 (i)) and DEDEA-PEG5000 QDs conjugated with anti-human W6/32 antibodies (ii). Gel condition: 0.5 % agarose gel (elution buffer: 5 mM TBE buffer and 1% SDS) 50V, 30 min.

(b) Fluorescence images of EBV infected B-cells stained by DEDEA-PEG5000 QDs (i) and DEDEA-PEG5000 QDs conjugated with anti-human W6/32 antibodies (ii).