Electronic Supplementary Information for

A novel far-visible and near-infrared pH probe for monitoring near-neutral physiological pH changes: imaging in live cells

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\textsuperscript{1}H NMR, \textsuperscript{13}C NMR and MALDI-TOF MS spectra.
**Fig. S1** The optimized constructs of **ESCY** with positively charged indolinium group (left) and neutral compound (right), calculated at the B3LYP/6-311G (d,p) level using Gaussian 09 software. The gray, white, blue, purple and red spheres refer to C, H, N, I and O atoms, respectively.
**Fig. S2** The time-dependent fluorescence intensities of 10 μM ESCY in 40 mM HEPES buffer at pH 5.00, 7.40 and 8.00, respectively. $\lambda_{\text{ex}} = 530$ nm and $\lambda_{\text{em}} = 650$ nm.
Fig. S3 Cell cytotoxic effect of ESCY on SW480 cells. 1, control; 2, 0.01 μM; 3, 0.1 μM; 4, 1 μM; 5, 10 μM; 6, 100 μM. Data are expressed as mean values ± standard error of the mean of three independent experiments, each performed in triplicate.
$^1$H NMR, $^{13}$C NMR spectra and MS (MALDI-TOF) analysis report of Compound 1 and ESCY.

$^1$H NMR spectrum of Compound 1
$^1$H NMR and $^{13}$C NMR spectra of ESCY

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MS (MALDI-TOF) analysis report of ESCY
$^1$H-$^1$H COSY NMR spectrum of ESCY in CD$_3$OD/D$_2$O (10 : 1, v/v) in the range of 6.5-8.7 ppm at pH 5.00

$^1$H NMR spectrum of ESCY in CD$_3$OD/D$_2$O (10 : 1, v/v) in the range of 1900-2700 Hz at pH 5.00