

# Enhanced Cellular Uptake with a Cobaltacarborane-Porphyrin-HIV-1 Tat 48-60 Conjugate

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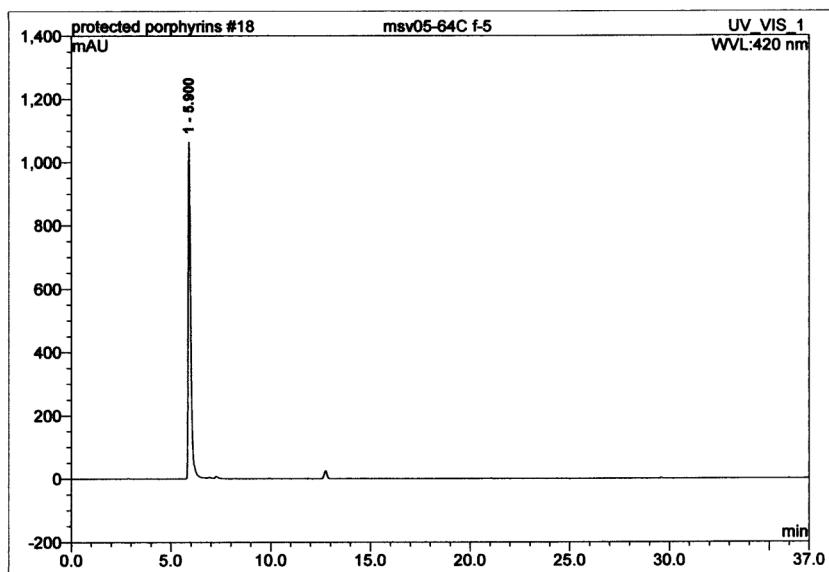
## Supporting Information

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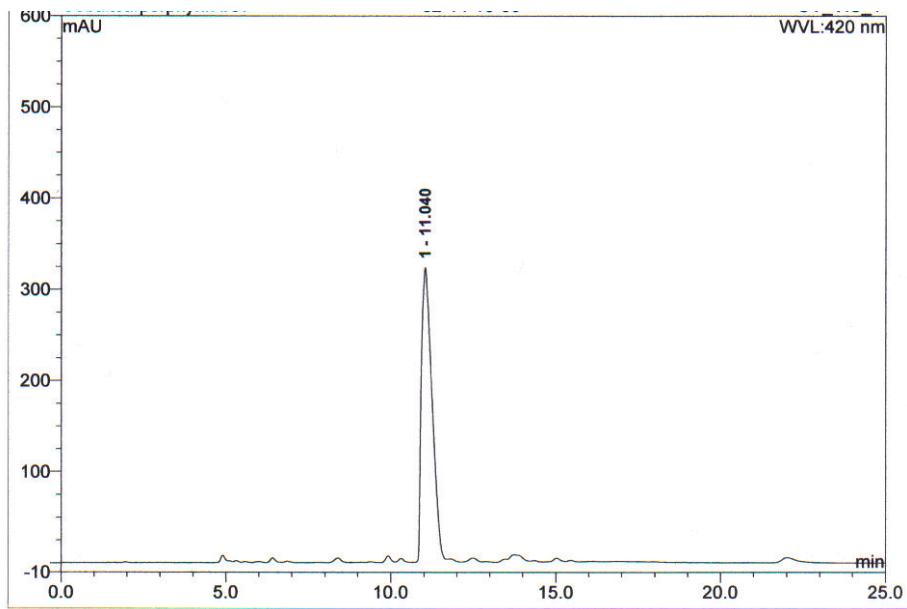
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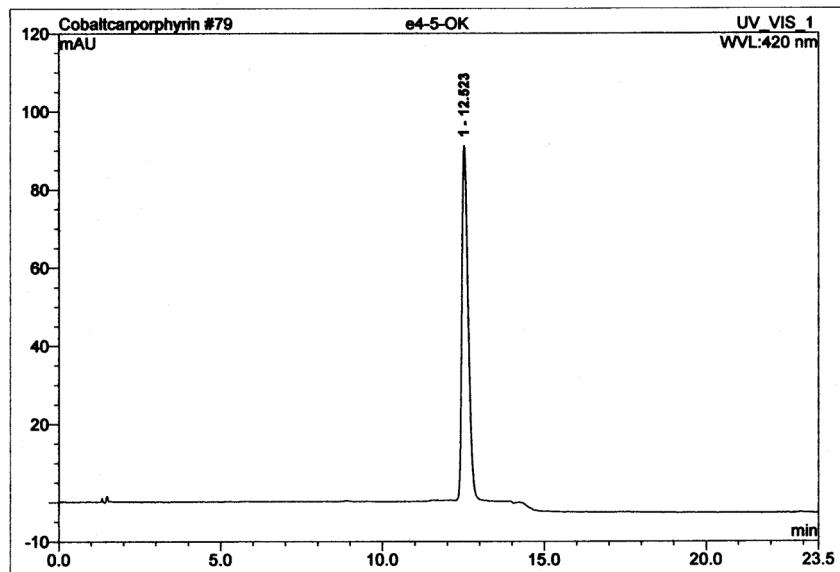
## 1. HPLC Traces



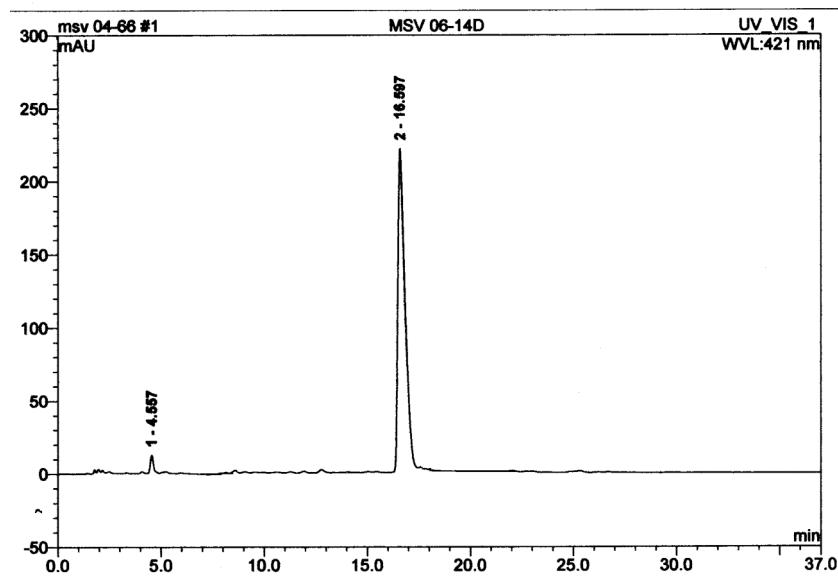
**Figure 1.** HPLC trace for porphyrin **3**. Column: Delta Pak C<sub>18</sub> 300 Å, 5 µm, 3.9 x 150 mm (Waters, USA); flow rate 1 mL/min.; injected volume 20 µL; wavelength detection: 420 nm. Stepwise gradient from 40% to 95% mobile phase B. Mobile phase A: 5% acetonitrile, 0.1% TFA, H<sub>2</sub>O. Mobile phase B: 5% H<sub>2</sub>O, 0.1% TFA, acetonitrile.



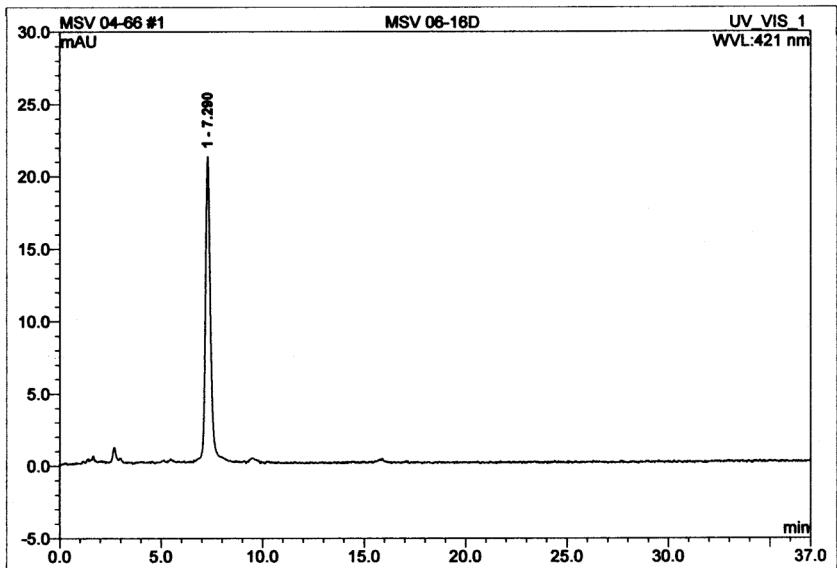
**Figure 2.** HPLC trace for conjugate **4**. Column: Delta Pak C<sub>18</sub> 300 Å, 5 µm, 3.9 x 150 mm (Waters, USA); flow rate 1 mL/min.; injected volume 20 µL; wavelength detection: 420 nm. Stepwise gradient from 85% to 95% mobile phase B. Mobile phase A: 5% acetonitrile, 0.1% TFA, H<sub>2</sub>O. Mobile phase B: 5% H<sub>2</sub>O, 0.1% TFA, acetonitrile.



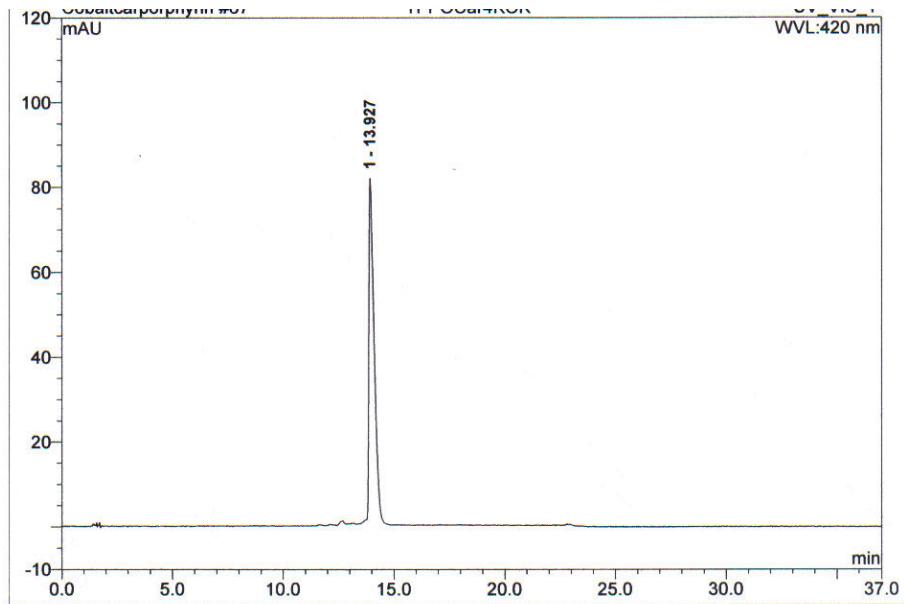
**Figure 3.** HPLC trace for Boc-protected conjugate **5**. Column: Delta Pak C<sub>18</sub> 300 Å, 5 µm, 3.9 x 150 mm (Waters, USA); flow rate 1 mL/min.; injected volume 20 µL; wavelength detection: 420 nm. Stepwise gradient from 85% to 95% mobile phase B. Mobile phase A: 5% acetonitrile, 0.1% TFA, H<sub>2</sub>O. Mobile phase B: 5% H<sub>2</sub>O, 0.1% TFA, acetonitrile.



**Figure 4.** HPLC trace for conjugate **5**. Column: Delta Pak C<sub>18</sub> 300 Å, 5 µm, 3.9 x 150 mm (Waters, USA); flow rate 1 mL/min.; injected volume 20 µL; wavelength detection: 420 nm. Stepwise gradient from 80% to 95% mobile phase B. Mobile phase A: 5% acetonitrile, 0.1% TFA, H<sub>2</sub>O. Mobile phase B: 5% H<sub>2</sub>O, 0.1% TFA, acetonitrile.

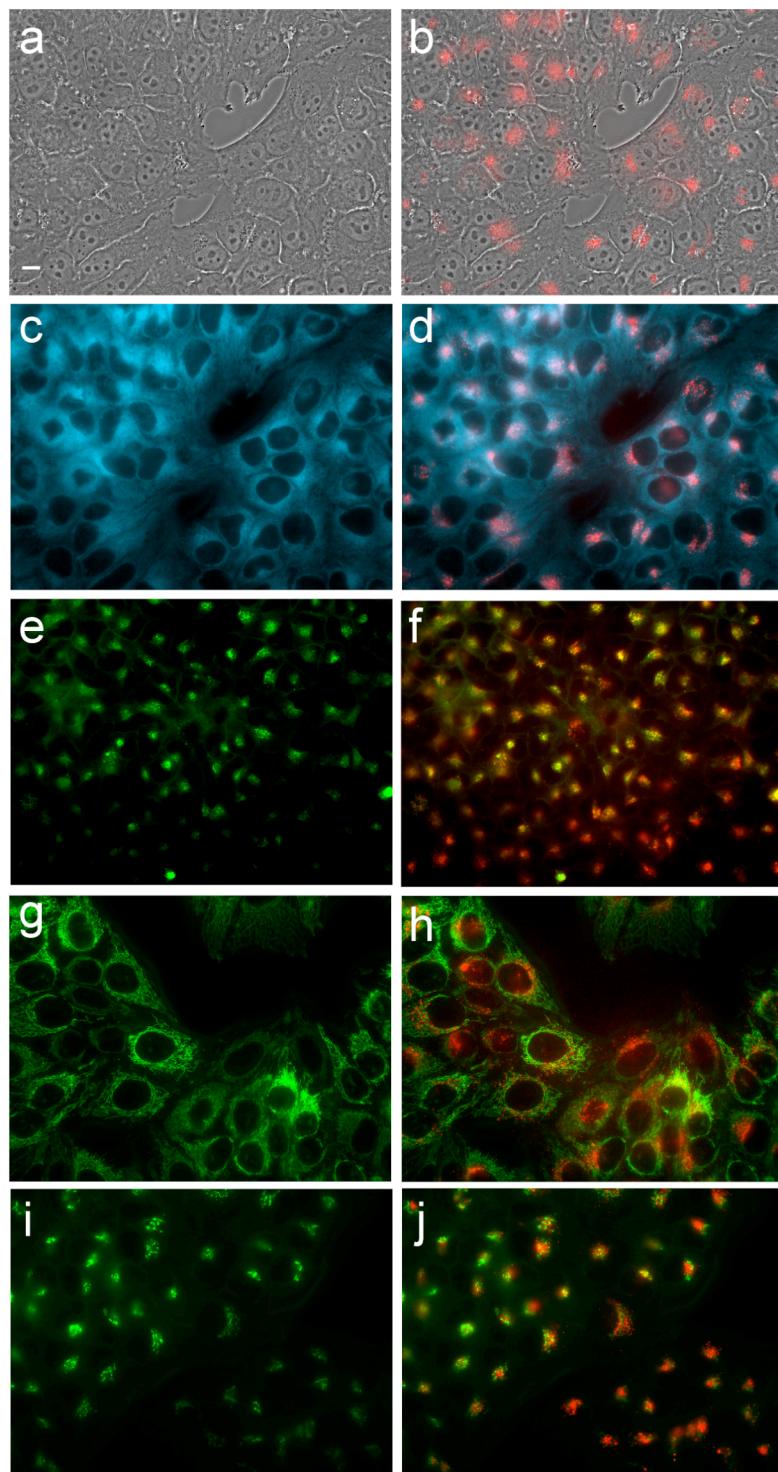


**Figure 5.** HPLC trace for conjugate **6**. Column: Delta Pak C<sub>18</sub> 300 Å, 5 µm, 3.9 x 150 mm (Waters, USA); flow rate 1 mL/min.; injected volume 20 µL; wavelength detection: 420 nm. Stepwise gradient from 80% to 95% mobile phase B. Mobile phase A: 5% acetonitrile, 0.1% TFA, H<sub>2</sub>O. Mobile phase B: 5% H<sub>2</sub>O, 0.1% TFA, acetonitrile.

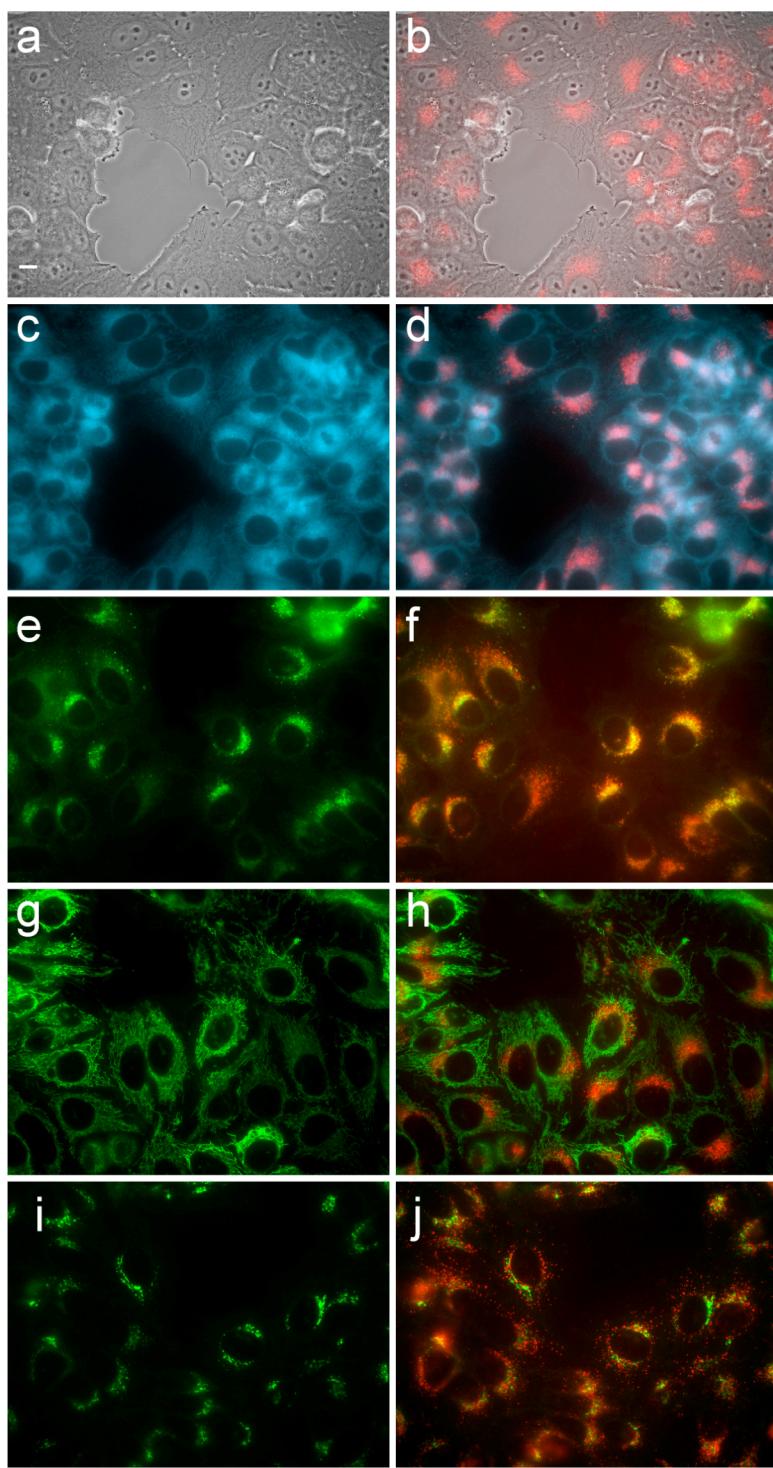


**Figure 6.** HPLC trace for conjugate **7**. Column: Delta Pak C<sub>18</sub> 300 Å, 5 µm, 3.9 x 150 mm (Waters, USA); flow rate 1 mL/min.; injected volume 20 µL; wavelength detection: 420 nm. Stepwise gradient from 85% to 95% mobile phase B. Mobile phase A: 5% acetonitrile, 0.1% TFA, H<sub>2</sub>O. Mobile phase B: 5% H<sub>2</sub>O, 0.1% TFA, acetonitrile

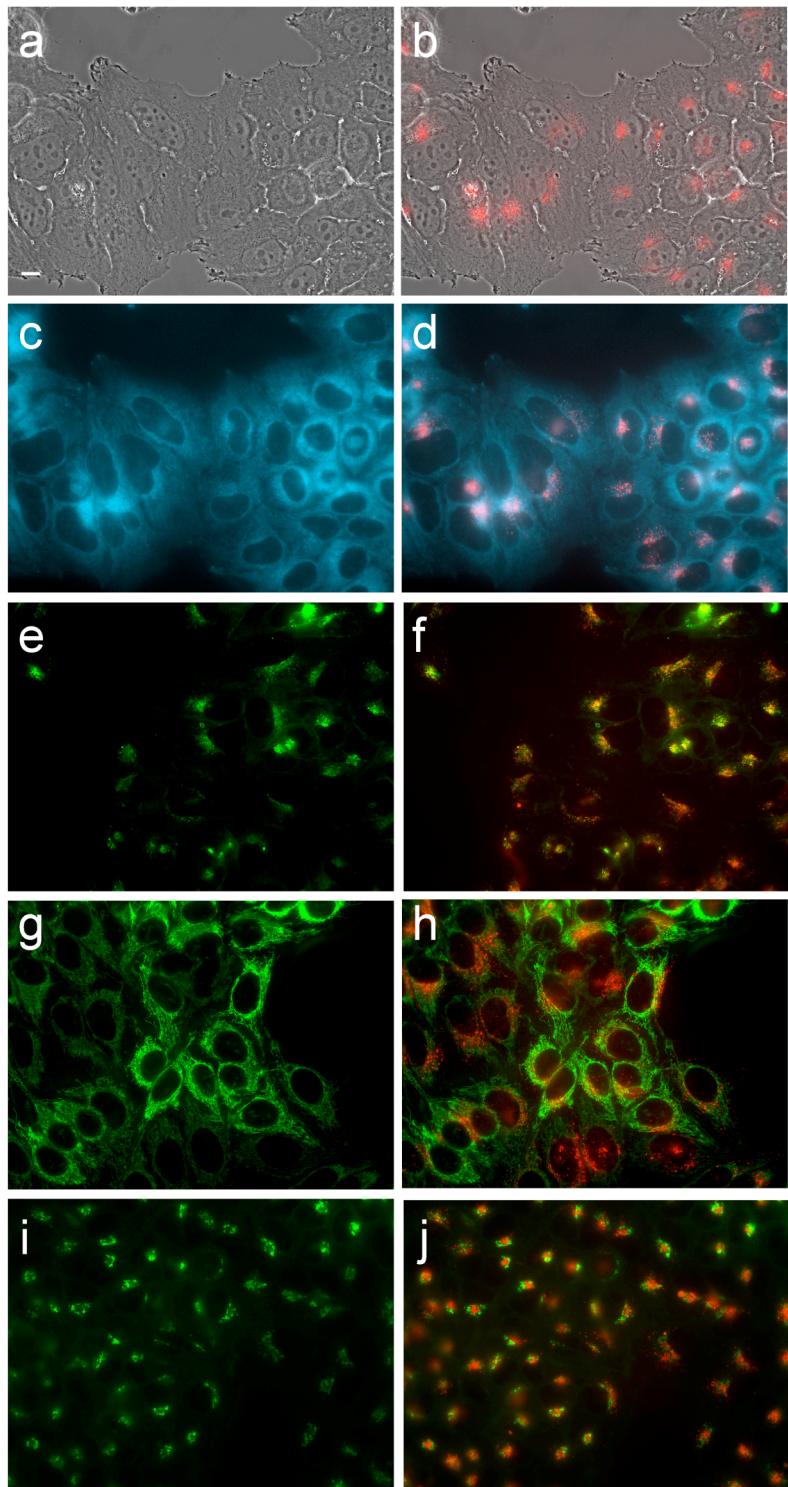
## 2. Subcellular Localization



**Figure 7.** Subcellular localization of conjugate **4** in HEp2 cells at 10  $\mu$ M for 18 h. (a) Phase contrast, (b) Overlay of **4** fluorescence and phase contrast, (c) ER Tracker Blue/White fluorescence, (e) LysoSensor Green fluorescence, (g) MitoTracker Green fluorescence, (i) BODIPY Ceramide, (d), (f), (h), and (j) overlays of organelle tracers with **4** fluorescence. Scale bar: 10  $\mu$ m.



**Figure 8.** Subcellular localization of conjugate **5** in HEp2 cells at 10  $\mu\text{M}$  for 18 h. (a) Phase contrast, (b) Overlay of **5** fluorescence and phase contrast, (c) ER Tracker Blue/White fluorescence, (e) Lysosensor Green fluorescence, (g) MitoTracker Green fluorescence, (i) BODIPY Ceramide, (d), (f), (h), and (j) overlays of organelle tracers with **5** fluorescence. Scale bar: 10  $\mu\text{m}$ .



**Figure 9.** Subcellular localization of conjugate **7** in HEp2 cells at 10  $\mu\text{M}$  for 18 h. (a) Phase contrast, (b) Overlay of **7** fluorescence and phase contrast, (c) ER Tracker Blue/White fluorescence, (e) Lysosensor Green fluorescence, (g) MitoTracker Green fluorescence, (i) BODIPY Ceramide, (d), (f), (h), and (j) overlays of organelle tracers with **7** fluorescence. Scale bar: 10  $\mu\text{m}$ .