

Supplementary Information

A Quantum dot-lucigenin probe for Cl^-

Maria Jose Ruedas-Rama and Elizabeth A. H. Hall*

Institute of Biotechnology, University of Cambridge, Tennis Court Road, Cambridge, UK CB2 1QT. E-mail: lisa.hall@biotech.cam.ac.uk; Fax: + 44 1223 334161; Tel: +44 1223 334149

Chloride response of QD-MPA-lucigenin and QD-DHLA-lucigenin conjugates

Lucigenin was coupled to QDs-MPA or QDs-DHLA through electrostatic interaction between negatively charged QD surfaces and the positively charged nitrogens of lucigenin. Lucigenin produces a quenching of the both QDs luminescence, which is restored by adding chloride ion. Figure SI-1 shows the enhancement of the luminescence of QDs-MPA and QD-DHLA in the presence of different chloride concentrations. Both conjugates show similar response toward chloride ions.

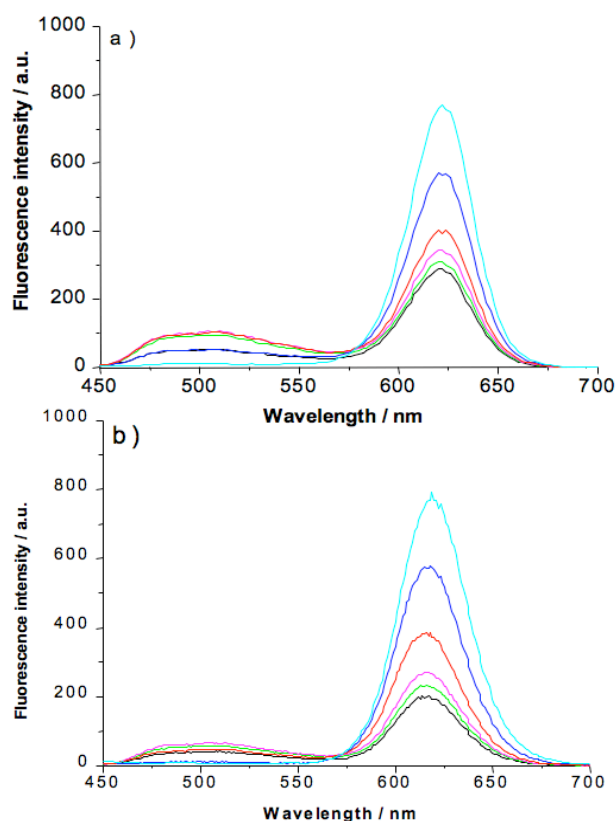


Figure SI-1. Enhancement of luminescence of (a) QD₆₂₀-MPA-lucigenin and (b) QD₆₂₀-DHLA-lucigenin conjugates by different chloride ions concentrations: black (0 mM); green (0.1 mM); pink (1 mM); red (10 mM); blue (100 mM); cyan (500 mM).