



**Figure S1.** The dependence of the BRET efficiency on the distance between QDs and Luc8's. **(a)** A schematic of two conjugates with different size: a covalent conjugate with Luc8 directly coupled to QD655 (20 nm), and a non-covalent complex with Luc8 binding to a streptavidin-coated QD655a (22 nm) mediated by a biotinylated NTA ligand. **(b)** The fluorescence spectra of two complexes at equal concentrations (5.5 pmol). **(c)** The bioluminescence emission spectra of two complexes at equal concentrations upon the addition of 1  $\mu\text{g}$  coelenterazine.