## **Supporting Information**

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**Fig. S1.** Representative 3D projections used to aid in characterization of individual QD puncta at the plasma membrane or inside the cell. (A) Side-on view of a transfected N2a cell labeled with QD probe. (B) Top-down view of the same transfected N2a cell. Green, anti-cadherin PM marker; red, QD probe; white arrows, an exemplary QD puncta inside the cell showing orange pixels that indicate green plasma membrane fluorescence lies above red QD fluorescence; cyan arrows, an exemplary QD puncta on the plasma membrane showing a lack of orange pixels indicating red QD fluorescence that protrudes from the green plasma membrane.



Fig. 52. The number of replicates analyzed to determine the internalization of QD-HA-5-HT1A in the absence of 5-HT stimulation over time. This statistical information is associated with data in Fig. 2. (A) The total number of QD puncta counted for each data point. (B) The number of cells analyzed for each data point.



Fig. S3. The number of replicates analyzed to determine the percentage of QD puncta internalized by 5-HT-stimulated N2a cells. This statistical information is associated with data in Fig. 3. (A) The total number of QD puncta counted and (B) the number of cells analyzed are shown for each data point in experiments in which N2a cells were subjected to continuous 5-HT stimulation. (C) The total number of QD puncta counted and (D) the number of cells analyzed are shown for each data point in experiments in which N2a cells were subjected to continuous 5-HT stimulation. (C) The total number of QD puncta counted and (D) the number of cells analyzed are shown for each data point in experiments in which N2a cells were subjected to a 15-min pulse of 5-HT stimulation.