Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

for

An enzyme-free FRET Nanoprobe for ultrasensitive Ketamine detection based on ATP-fueled target recycling

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Table S1. Sequences of aptamers and Y-motif

Ket-Apt	GGGGGGACGGGGCGGGACGTGGTGTGTGGTTCGTGTCCCC
ATP-Apt	ACCTGGGGGAGTATTGCGGAGGAAGGT
ssDNA	GGGGACACGAACCACACACCACGTCCCGCCCCGTCCCCCC
Ya	CGTACTCCCGCTTTTTTTTTTTACCTGGGGGAGTATTGCGGAGG AAGGTGGGGGGACGGGGCGGGAGTACG-FAM
Yb	CACGGCGAATGTTTTTTACCTTCCTCCGCAATACTCCCCCAGGT
Yc	SH-TTTTTTCTACTCCCGCCCCGTCCATTCGCCGTG

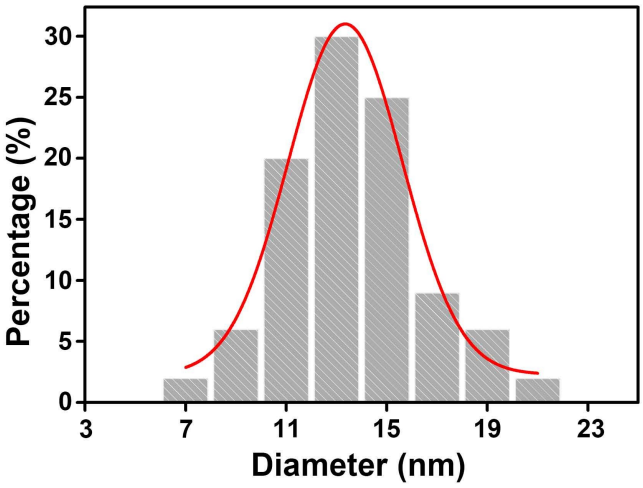

Fig. S1 The size distribution histograms of AuNPs.

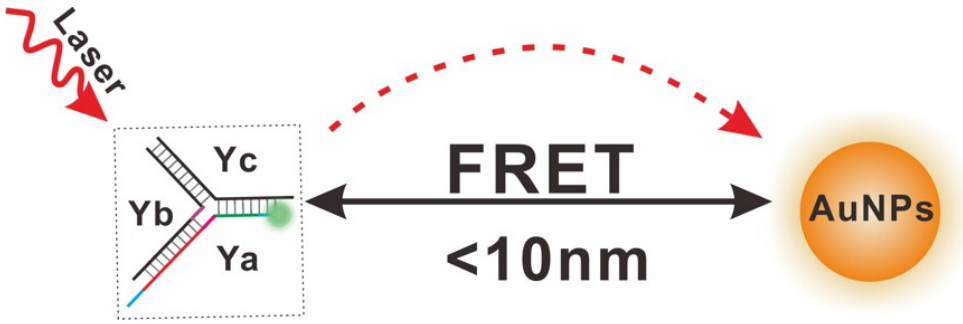

Fig. S2 Mechanism of fluorescence resonance energy of transfer (FRET) occurring between Y-motif and AuNPs (excited at 492 nm and emitted at 520 nm).

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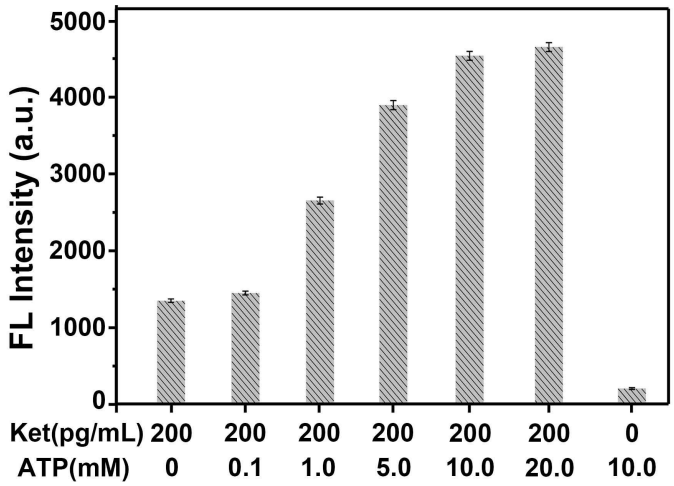

Fig. S3 Influence of the ATP concentration on the detection effects for ketamine.

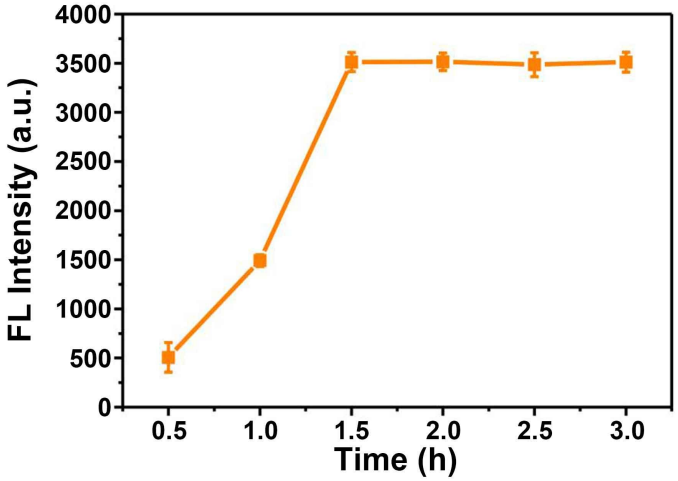

Fig. S4 Kinetic characterization of the fluorescence recovery. The fluorescence of FAM was up to the highest intensity within 1.5 h. The concentrations of ketamine was 120 pg/mL.The ATP concentration used is 10 mM.

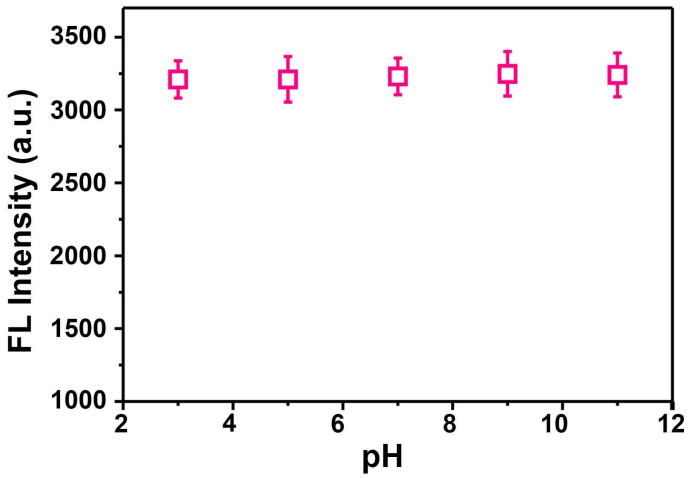

Fig. S5. Influence of pH on the response of the developed Y@AuNPs fluorescence nanoprobe for 105 pg/mL of ketamine.