

Supporting Information

**Precise Quantification of MicroRNAs based on proximity ligation of AuNPs-immobilized  
DNA probes**

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**Table S1. Sequences of DNA oligonucleotides used in the work**

Name	Sequence(5'-3')
Proximity Probe 1	SH- <b>TTTTTTTTTT</b> GGGAACACACCTGGTAACTAT <b>CCATCATTACC</b>
Proximity Probe 2	P- <b>CGGCAGTATTA</b> ACTCCACGAGACGCACTGT <b>TTTTTTTTTT</b> -SH
miR-200c	UAAUACUGCCGGGUAUGAUGGA
Forward Primer(FP)	GGGAACACACCTGGTAAAC
Reverse Primer(RP)	CAGTGCCTCTCGTGGAGT
Proximity Probe-34-A	SH- <b>TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT</b> GCAGCCAGGCAGTGTAGTTAG <b>CGCAAT</b> <b>CAGC</b>
Proximity Probe-34-B	P- <b>TA</b> ACTACACT <b>GCCT</b> ACCTCGGACCCTGCAC <b>TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT</b> <b>TTT</b> -SH
miR-34c	AGGCAGUGUAGUUAGCUGAUUGC
Forward Primer-34(FP-34)	GCAGCCAGGCAGTGTAGTTAGC
Reverse Primer-34(RP-34)	GTGCAGGGTCCGAGGT
Proximity Probe-340-A	SH- <b>TTTTTTTTTT</b> GTAACCCGTTGAACCC <b>ATTAATCAGTCT</b>
Proximity Probe-340-B	P- <b>CATTGCTTTATAA</b> ACCTCGGACCCTGCAC <b>TTTTTTTTTT</b> -SH
miR-340	UUAUAAAGCAAUGAGACUGAUU
Forward Primer-340(FP-340)	GTAACCCGTTGAACCC <b>CATT</b>
Reverse Primer-340(RP-340)	GTGCAGGGTCCGAGGT
Stem-loop Primer	GTCGTATCCAGTGCAGGGTCCGAGGTATT <b>CGCACTGGATACGACTCCATC</b>

Proximity Probe 1 is designed by adding spacer region(orange),forward primer region(blue),a connector region(green) in the 3'-end.Proximity Probe 2 is designed by adding spacer

region(orange),reverse primer region(blue),a connector region(green) in the 5'-end.

**Table S2. Sequences of miRNA for specificity using in this work**

Name	Sequence(5'-3')
miR-200a	UAA <b>C</b> ACUG <b>UC</b> UGGUAACGAUGU
miR-200b	UAAUACUGCC <b>U</b> GGUAAUGAUG <b>A</b>
miR-200c	UAAUACUGCCGGGUA <u>AAUGAUGGA</u>
miR-141	UAA <b>C</b> ACUG <b>UC</b> UGGUA <b>AA</b> GAUGG
miR-429	UAAUACUG <b>UC</b> UGGUA <b>AA</b> ACCGU
miR-21	UAGCUUAUCAGACUGAUGUUGA

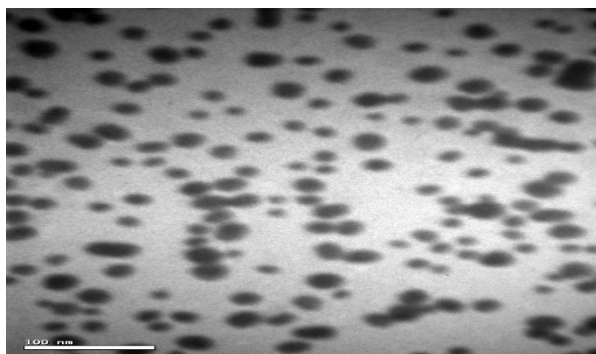


Fig. S1 Transmission electron microscopy results of AuNPs.

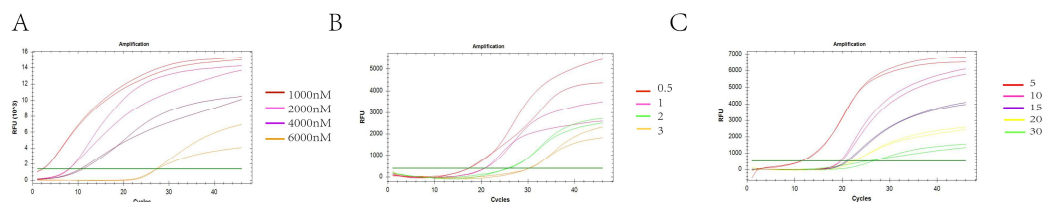


Fig.S2 qPCR curves of the optimization of experimental conditions: (A) qPCR curves of different probes. (B) qPCR curves of different ligation time. (C) qPCR curves of different primer concentrations.