

*Supporting information*

**Early detection of lung cancer via biointerference-free, target microRNA-triggered core-satellite nanocomposites**

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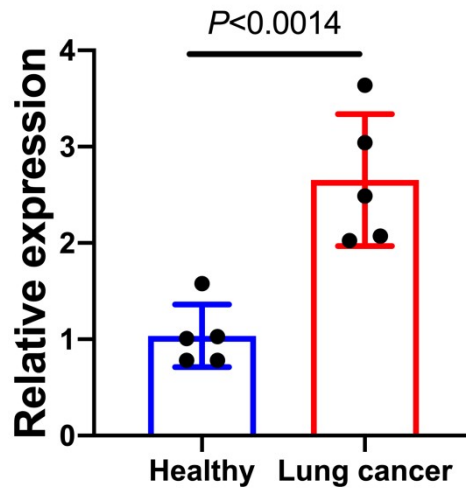
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**Fig. S1.** The relative expression of miRNA-21 in plasma was obtained from 5 lung cancer patients and 5 healthy donors. Data are represented as mean  $\pm$  s.d., where error bars represent s.d. of biological replicates.

**Table S1. The sequences of the oligonucleotides**

| Oligonucleotides     | Sequences                 |
|----------------------|---------------------------|
| DNA1 (from 5' to 3') | SH-TTTTTTTTTTTTCAACATCAGT |
| DNA2 (from 5' to 3') | CTGATAAGCTATTTTTTTTTT-SH  |
| miRNA-21             | AGUUGUAGUCAGACUAUUCGAU    |
| miRNA-155            | UAA AUGCUAAUCGUGAUAGGGGU  |
| miRNA-10b            | UACCCUGUAGAACCGAAUUUGUG   |
| Primer miRNA-21      | TAGCTTATCAGACTGATGTTGA    |

**Table S2. The demographic data for all healthy participants and lung cancer patients.**

| Patient ID | Gender | Age | Stage |
|------------|--------|-----|-------|
| H1         | M      | 28  | NA    |
| H2         | M      | 22  | NA    |
| H3         | F      | 24  | NA    |
| H4         | M      | 29  | NA    |
| H5         | F      | 38  | NA    |
| H6         | M      | 29  | NA    |
| H7         | M      | 20  | NA    |
| H8         | F      | 25  | NA    |
| H9         | M      | 28  | NA    |
| H10        | M      | 28  | NA    |
| P1         | F      | 29  | IA    |
| P2         | F      | 63  | IA    |
| P3         | F      | 58  | IA    |

|     |   |    |      |
|-----|---|----|------|
| P4  | F | 41 | IA   |
| P5  | M | 67 | IB   |
| P6  | F | 52 | IA   |
| P7  | F | 60 | IB   |
| P8  | F | 28 | IA   |
| P9  | F | 67 | IA   |
| P10 | M | 67 | IA   |
| P11 | M | 62 | IIIB |
| P12 | M | 68 | IIIC |
| P13 | M | 43 | IIIC |
| P14 | M | 85 | IVB  |
| P15 | M | 62 | IIIA |
| P16 | M | 65 | IIIA |
| P17 | M | 66 | IIIB |
| P18 | M | 59 | IIIB |
| P19 | M | 54 | IVB  |
| P20 | F | 52 | IIIA |

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