Supporting Information (SI)

for

An ultra-low level detection of hepatocellular carcinoma global methylation using AuNPs modified carbon fiber microelectrode

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Table S1: Sequences of DNA oligonucleotides and primes.

| Oligos                           | 5’-3’                                      |
|----------------------------------|--------------------------------------------|
| Methylated Sequence              | AATACCTCGCCCTACTTTGACTCGTACCGATACTGG       |
|                                  | CGCACCCACTAACCTACGCCCAC                    |
| 4 site Methylated Sequence       | AATACCTCACCCTACTTTGACTCACTACGATACTCGG     |
|                                  | CGCACCCACTAACCTACGCCCAC                    |
| 1 site Methylated Sequence       | AATACCTCACCCTACTTCAACTACGATACTGG          |
|                                  | CACACCCACTAACCTACGCCCAC                    |
| Unmethylated Sequence            | AATACCTCACCCTACTTCAACTACGATAC             |
|                                  | CACACCCACTAACCTACGCCCAC                    |
| LINE-1-M forward                 | GTAAGGGGTAGGGAGTTTTTTTTTTTT               |
| LINE-1-M reward                  | TCTCAAACTACTATAACTAACAATCAAC              |
| LINE-1-U forward                 | GCAAGGGGTAGGGAGTTTTTTTTTT                |
| LINE-1-U reward                  | TCAACTGCAAGGCCGCAGCAAGGCTG                |
| 201bp LINE-1- F                  | AGGCATTGTCTCAGTGGA                       |
| 201bp LINE-1- R                  | CCACGGAGTCCTCGTGATT                      |
Fig. S1. The elemental distribution of AuNPs-CFME. (A) The EDS spectrum. The inset: the weight ratio of elements. (B) The SEM image. (C) The elemental mapping image of Au. (D) The elemental mapping image of C.

Fig. S2. The SEM images of AuNPs-CFME. (A) (B) 25 s electrodeposition. (C) (D) 100 s electrodeposition. (E) (F) 200 s electrodeposition.