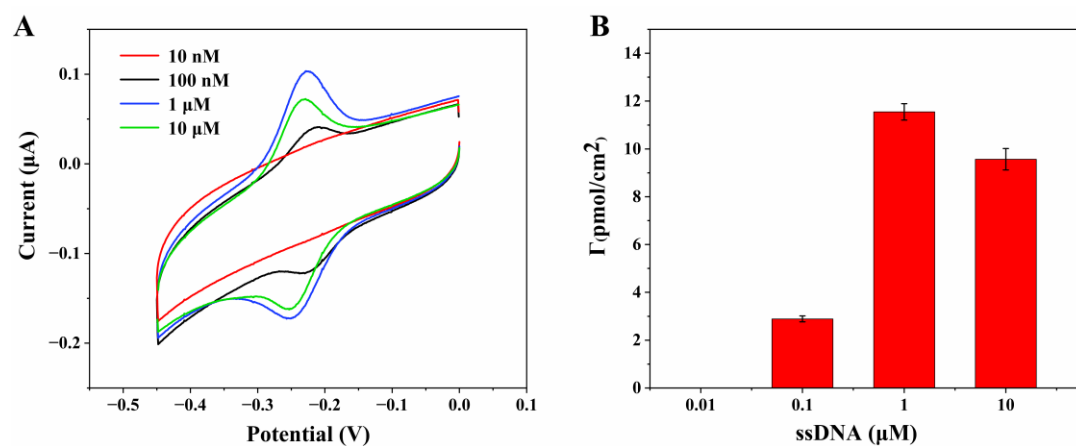


# Supporting Information

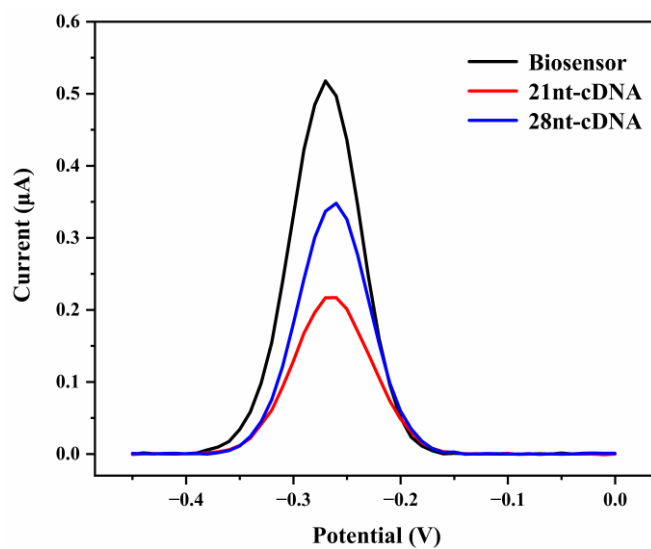
## Sensitive electrochemical biosensor for rapid screening of tumor biomarker TP53 gene mutation hotspot

**Table S1.** The used oligonucleotides in this study.

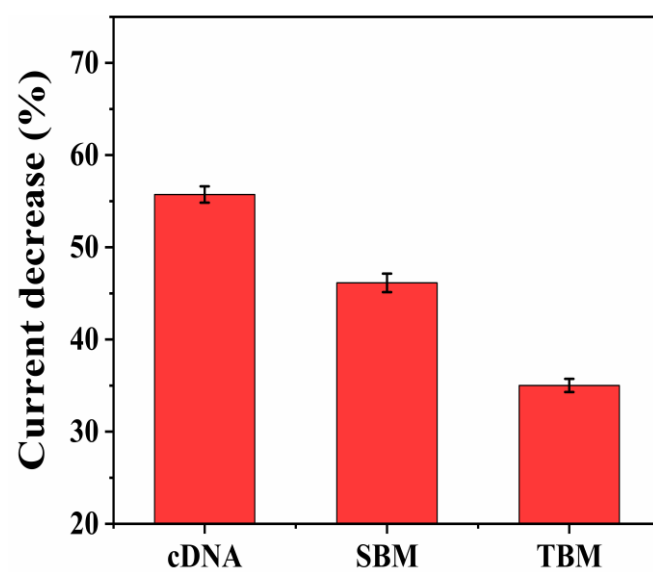
Name	Sequence (5'→3')
ssDNA	HS-SH-(CH <sub>2</sub> ) <sub>6</sub> -GGC ATG AAC CGG AGG CCC ATC TCA TGC C-MB
21nt-cDNA	GAT GGG CCT CCG GTT CAT GCC
28nt-cDNA	GGCATGAGATGGGCCTCCGGTTCATGCC'
SBM (single base mismatch)	GAT GGG CCT CCA GTT CAT GCC
TBM (triple base mismatch)	GAT GGG CCT CAA ATT CAT GCC



**Figure S1.** CV of a gold electrode after 16 h exposure to ssDNA at concentrations of 10 nM, 100 nM, 1  $\mu\text{M}$  and 10  $\mu\text{M}$  in pH 7.4 PBS (A), and electrode surface coverage of ssDNA probes with different concentrations (B).



**Figure S2.** DPV curves of the electrochemical geno-sensor after 30 min hybridization to 1  $\mu\text{M}$  21 nt cDNA and 28 nt cDNA, respectively.



**Figure S3.** Detection capabilities of the DNA sensors for target DNA in complex systems of 50% fetal bovine serum.