

## **Supporting Information**

# **Single-Shot Analytical Assay Based on Graphene-Oxide-Modified Surface Acoustic Wave Biosensor for Detection of Single-Nucleotide Polymorphisms**

Xiang Liu<sup>1</sup>, Jia-Ying Wang<sup>1, 2</sup>, Xiao-Bing Mao<sup>1, 3</sup>, Yong Ning<sup>1, \*</sup>, and Guo-Jun Zhang<sup>1, \*</sup>

<sup>1</sup>School of Laboratory Medicine, Hubei University of Chinese Medicine, 1 Huangjia Lake West Road, Wuhan 430065, China

<sup>2</sup>Department of clinical laboratory, Taihe Hospital, Hubei University of Medicine, 32 South Renmin Road, Shiyan 442000, China

<sup>3</sup>School of Life Sciences, Southwest University, 2 Tian Sheng Road, Beibei, Chongqing 400715, China

\* Corresponding author: Tel: +86-27-68890259, Fax: +86-27-68890071

E-mail: zhanggj@hbtcu.edu.cn, ningyong128@163.com

## **Table of contents**

A. Oligonucleotides used in this study.....	S-2
B. SEM image of the gold chip surface.....	S-3
C. Comparison of GO and dextran.....	S-4
D. A linear relationship between the phase variation and the logarithmic value of target DNA concentrations.....	S-5
E. Detection of SNPs at CYP2D6*10 by direct sequencing.....	S-6

**Table S1. Oligonucleotides used in this study**

Oligonucleotide	Sequence (5' to 3')
Wide probe	NH <sub>2</sub> -TGCACGCTACCCACCAGG
FC Oligo	CCTGGTGGGTAGCGTGCA
SBM Oligo	CCTGGTGAGTAGCGTGCA
NC Oligo	AATCCATGTTTGCTTCTGT
Primer1	CCATTGTTAGTGAGGCAGGTAT
Primer2	TGGTCGAAGCAGTATGGTGT

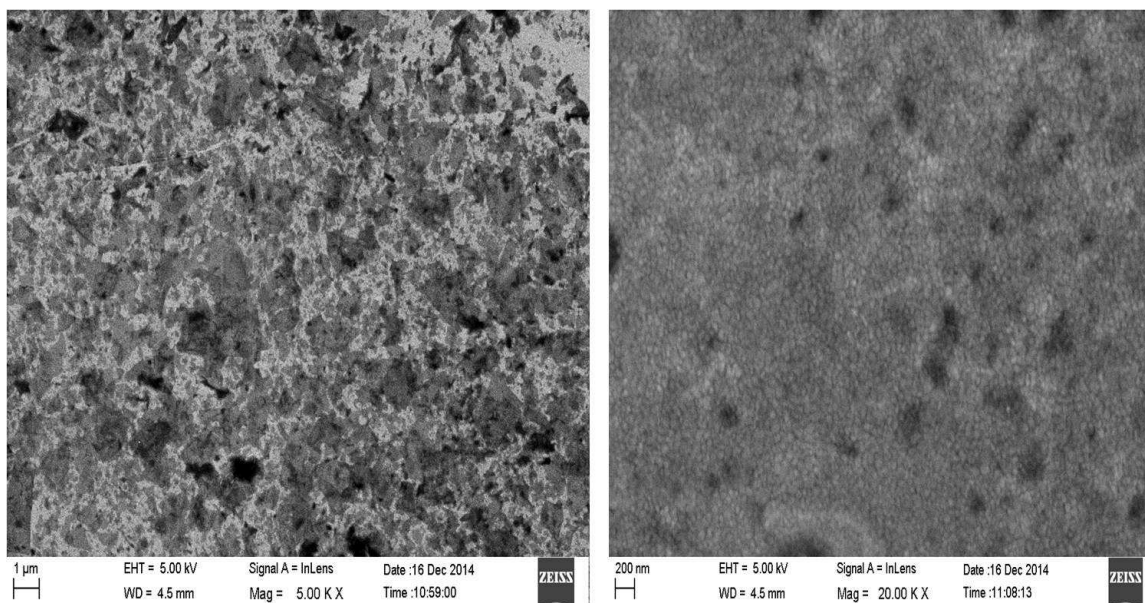


Figure S1. Scanning electron microscopy (SEM) images of the thin gold film: Left, GO-modified surface of the gold film; Right, bare surface of the gold film.

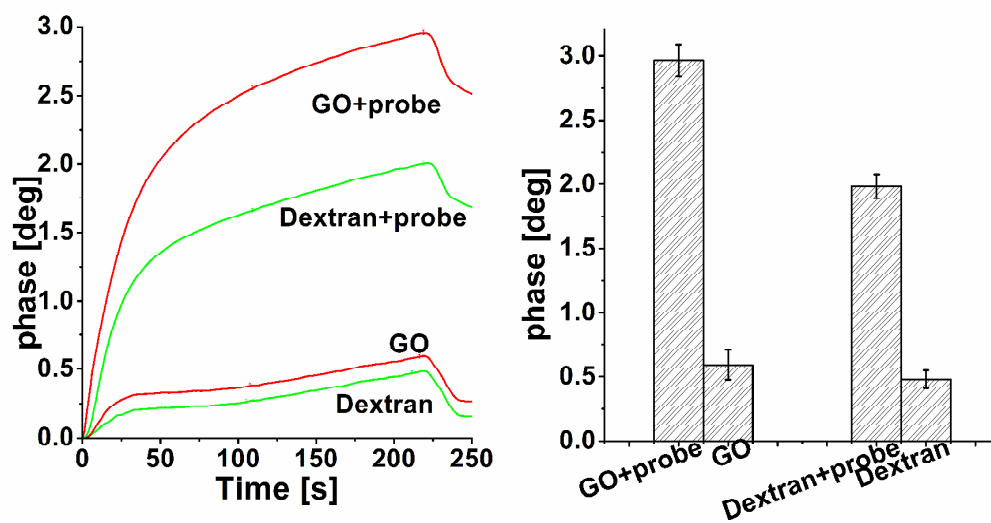


Figure S2. Comparison of GO and dextran as sensing interfaces.

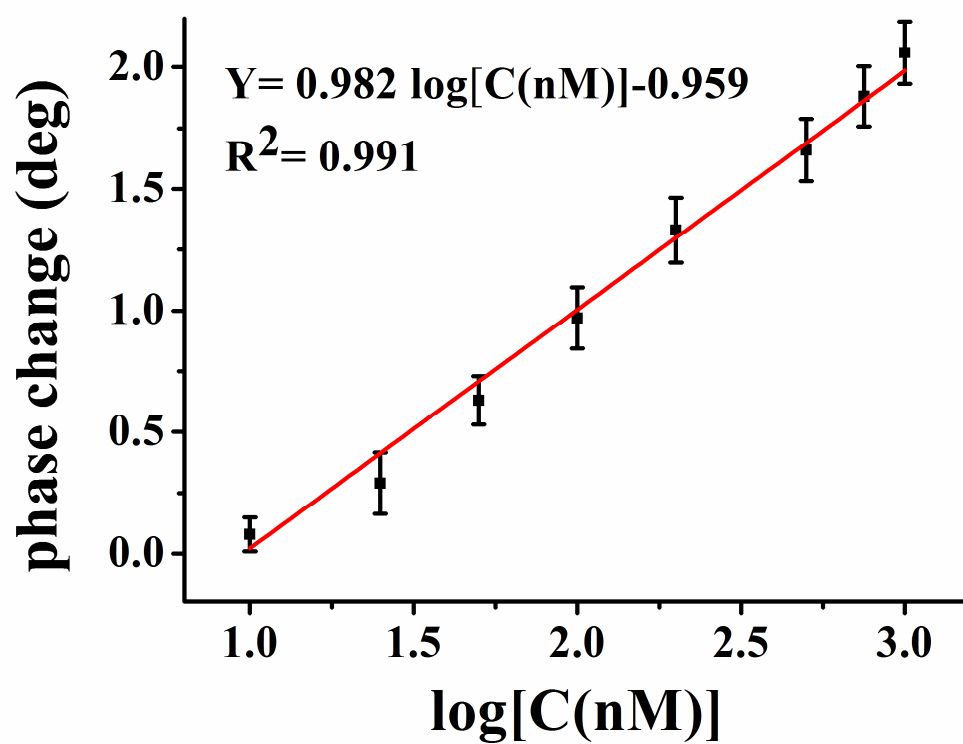


Figure S3. A linear relationship between the phase variation (Y) and the logarithmic value of target DNA concentrations.

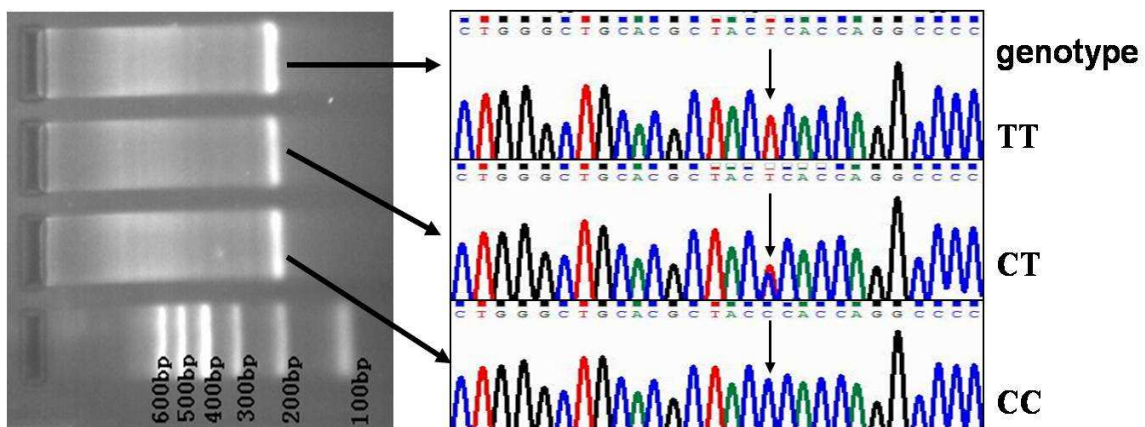


Figure S4. Detection of SNPs at CYP2D6\*10 by direct sequencing.