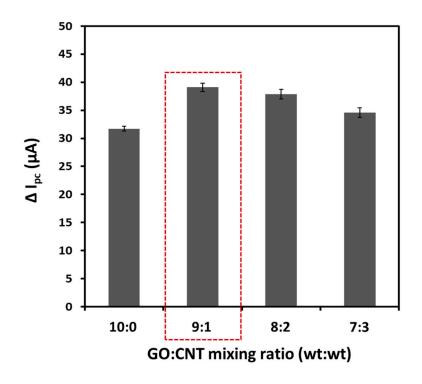
Supporting Information

## Electrochemical detection of H<sub>2</sub>O<sub>2</sub> released from prostate cancer cells using Pt nanoparticle-decorated rGO-CNT nanocomposite-modified screen-printed carbon electrodes

## Seokyung Lee<sup>1</sup>, Young Ju Lee<sup>2</sup>, Jae Hyung Kim<sup>1</sup> and Gi-Ja Lee<sup>1,2,\*</sup>

- <sup>1</sup> Department of Medicine, Kyung Hee University Graduate School, Seoul 02447, Republic of Korea
- <sup>2</sup> Department of Biomedical Engineering, College of Medicine, Kyung Hee University, Seoul 02447, Republic of Korea
- \* To whom correspondence should be addressed. E-mail: gjlee@khu.ac.kr



**Figure S1.** Changes in cathodic peak current ( $I_{Pc}$ ) of CNT/rGO on GCE according to the mixing ratio between GO and CNT (wt/wt) in PBS solution (0.1 M, pH 7.4) containing 2.5 mM H<sub>2</sub>O<sub>2</sub> and 0.1 M KCl.

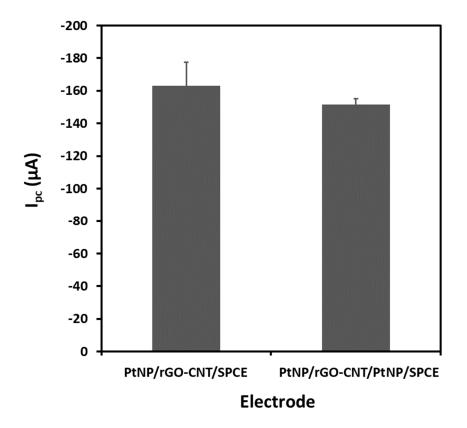


Figure S2. The cathodic peak current ( $I_{Pc}$ ) of PtNP/rGO-CNT/SPCE and PtNP/rGO-CNT/PtNP electrodes (n=4, respectively) from the CV curves in N<sub>2</sub>-saturated PBS solution (0.1 M, pH 7.4) containing 2.5 mM H<sub>2</sub>O<sub>2</sub> and 0.1 M KCl at a<sub>2</sub>potential range from -0.7 to 0.3 V (Ag pseudo-reference electrode) and at a scan rate of 50 mV/sec.

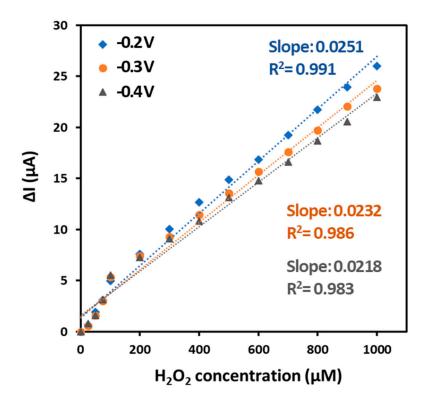


Figure S3. Effect of the applied potentials on the current response according to the  $H_2O_2$  concentration.