## **Supporting Information**

## Semi-quantification of ATP in Live Cells using Nonspecific Desorption of DNA from Graphene Oxide as the Internal Reference

Xiaohong Tan, Tao Chen, Xiangling Xiong, Ye Mao, Guizhi Zhu, Emir Yasun, Chunmei Li, Zhi Zhu, Weihong Tan\*

Molecular Science and Biomedicine Laboratory, State Key Laboratory of Chemo/Bio-Sensing and Chemometrics, College of Biology and College of Chemistry and Chemical Engineering, Hunan University, Changsha, 410082, P. R. China; Center For Research at Bio/nano Interface, Department of Chemistry and Department of Physiology and Functional Genomics, Shands Cancer Center, UF Genetics Institute and McKnight Brain Institute, University of Florida, Gainesville, FL, USA

> E-mail: <u>tan@chem.ufl.edu</u> Phone and fax: 352 846 2410

**Supporting Figures** 



Figure S1. TEM image of GO.



Figure S2. Fluorescence intensity of FAM-labeled ssDNA library/GO complex in the presence of different concentrations of FBS. Excitation: 480 nm, and emission: 520 nm.



Figure S3. Confocal microscopy of HeLa cells treated with ATP aptamer/GO under two conditions: 1) culture medium contained 10% FBS (A, B) and 2) serum-free medium (C, D). Bright-field images are on the right, and fluorescence images are on the left.



Figure S4. Fluorescence spectra of (A) AAMB and AAMB + ATP; (B) CMB and CMB + ATP. Excitation: 565 nm.



Figure S5. Confocal fluorescence microscopy of HeLa cells treated with AAMB/GO at different concentrations of GO. A, B) 1.25; C, D) 2.5; E, F) 5.0 µg/mL. The concentration of AAMB was 200 nM in all cases.



Figure S6. Confocal fluorescence microscopy of HeLa cells treated with AAMB/GO for 3 h and after further different incubation times. A, B) 2h; C, D) 4h; E, F) 8h.



Figure S7. Confocal microscopy of HeLa cells. Cells were treated with AAMB-internal reference/GO (A, B, C) or CMB-internal reference/GO (D, E, F). A, D) fluorescence images of AAMB or CMB; B, E) fluorescence images of internal reference; C, F) bright-field images.