Supplementary Information

Screening anti-metastasis drugs by cell adhesion-induced color change in a biochip

Shih-En Chou[1], Kuang-Li Lee[1], Pei-Kuen Wei[1,2] & Ji-Yen Cheng[1,2,3,4]

[1]Research Center for Applied Sciences, Academia Sinica, Taipei, 11529, Taiwan.

[2]Institute of Biophotonics, National Yang-Ming University, Taipei, 11221, Taiwan.

[3]Department of Mechanical and Mechatronic Engineering, National Taiwan Ocean University, Keelung, 20224, Taiwan.

[4]College of Engineering, Chang Gung University, Taoyuan, 33302, Taiwan.

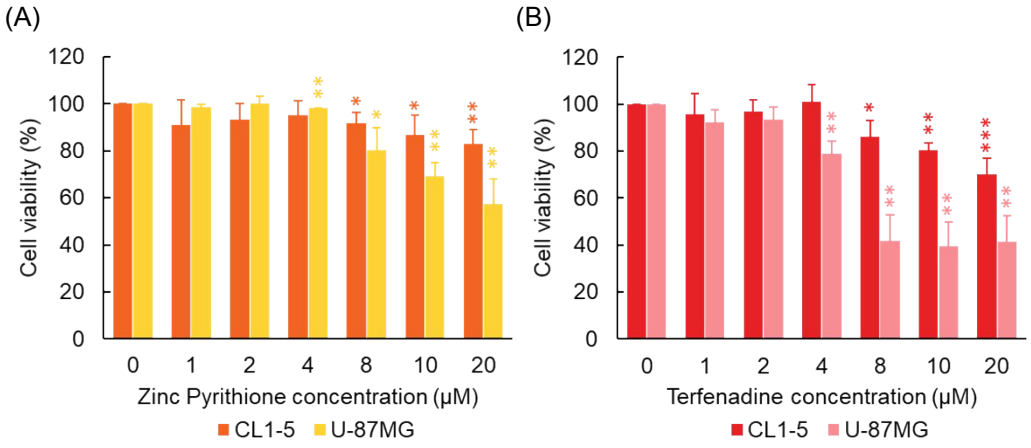

Figure S1. 24-hour cell viability of CL1-5 and U-87MG. (A) ZPT was toxic to CL1-5 and U-87MG cells at 8 μM and 4 μM, respectively. (B) Terfenadine reduced CL1-5 and U-87MG cell viability at 8 μM and 4 μM, respectively. Cells were seeded in 96-well plates and incubated overnight for growth. Then the cells were incubated with drugs for 24 hours to test the cytotoxicity. The degree of cell viability was measured using the CCK-8 kit and data are shown as percentages of live cells compared to that in the control group. Data were represented as mean with standard deviation from four and five independent experiments for CL1-5 and U-87MG cells, respectively. *, $P < 0.05$; **, $P < 0.01$, and ***, $P < 0.001$ compare with the control group.

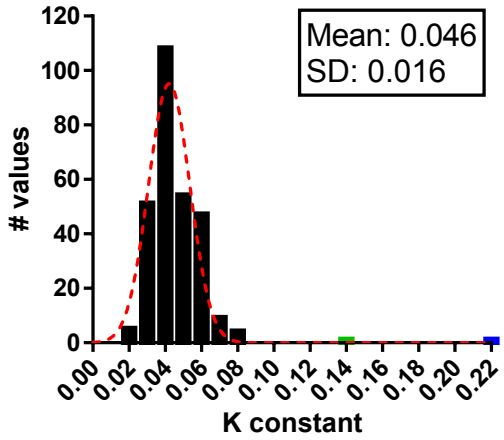

Figure S2. The histogram and Gaussian distribution of K constants measured by the CAKE assay. The major population of the K value from the 274 drugs tested on CL1-5 cells is fitted with Gaussian distribution. The mean of the distribution is 0.046 and the SD is 0.016. The blue bar is drug 71 and the green bar is drug 223.

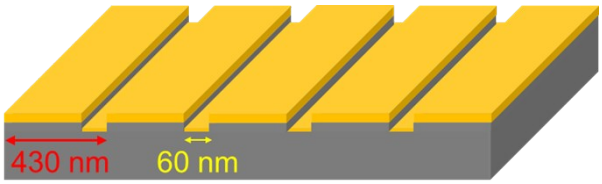

Figure S3. The schematic diagram of the biosensor in the CAKE system. The period and the width of the biosensor are 430 nm and 60 nm, respectively. A layer of gold (yellow) is deposited on the plastic substrate with nanoslit (grey).