

Supplementary information for

A Quantum Dot-Based Microfluidic Multi-Window Platform for Quantifying the Biomarkers of Breast Cancer Cells

Seyong Kwon,^a Minseok S. Kim,^b Eun Sook Lee^c Jang Sihm Sohn^d and Je-Kyun Park^{*a}

^a Department of Bio and Brain Engineering, Korea Advanced Institute of Science and Technology (KAIST), 291 Daehak-ro, Yuseong-gu, Daejeon 305-701, Republic of Korea, Tel: +82-42-350-4315; E-mail: jekyun@kaist.ac.kr

^b Samsung Advanced Institute of Technology, 97 Samsung 2-ro, Giheung-gu, Yongin-si, Gyeonggi-do 446-712, Republic of Korea.

^c Research Institute and Hospital, National Cancer Center, 323 Ilsan-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do 410-769, Republic of Korea.

^d Department of Pathology, College of Medicine, Konyang University, 158 Gwanjeodong-ro, Seo-gu, Daejeon 302-718, Republic of Korea.

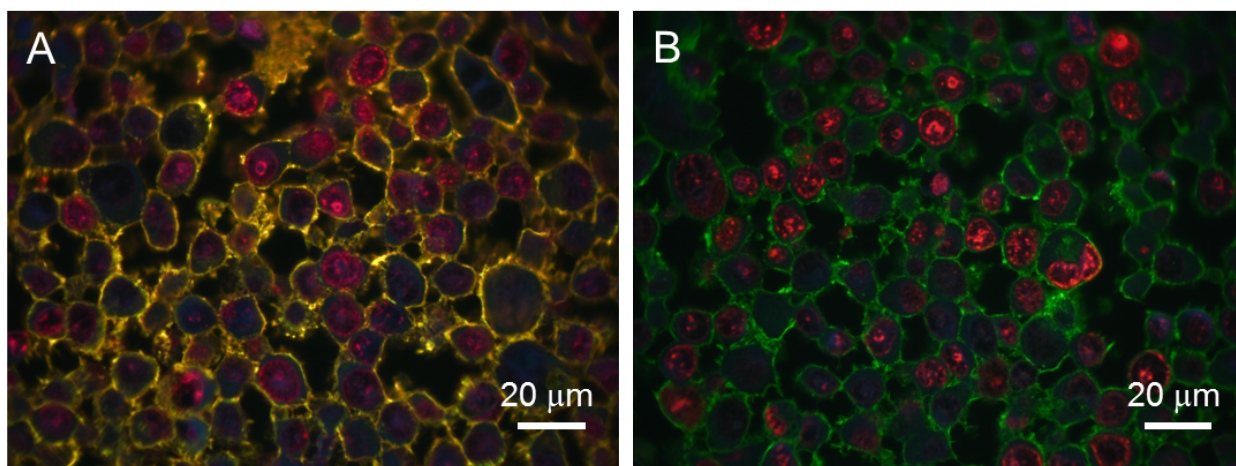


Fig. S1. Staining of HER2 with QD565, Ki-67 with QD655 on AU-565 cell-block sections. An incubation time of QD-conjugated secondary Abs was increased to fully occupy binding sites of primary Abs for 2 h. (A) Staining in the order, HER2 with QD565 and Ki-67 with QD655. (B) Staining in the order, Ki-67 with QD655 and HER2 with QD565.

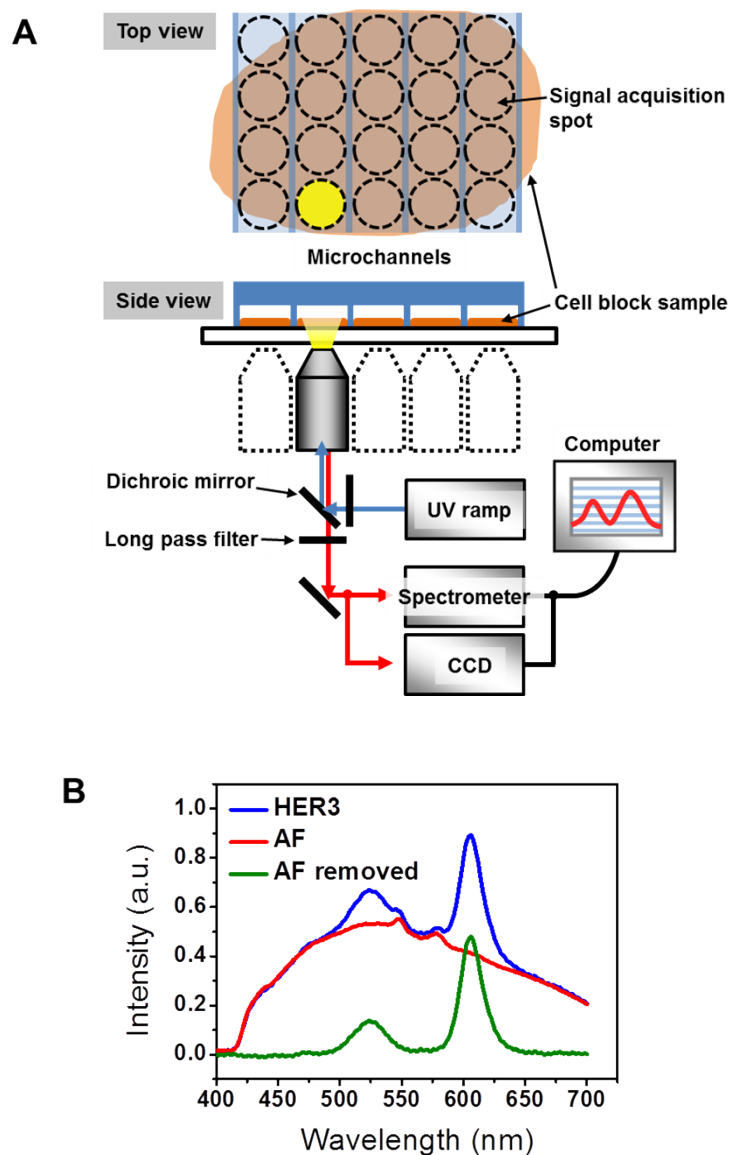


Fig. S2. Acquisition of QD signals. (A) Diagram of the optical spectroscopy equipment. A spectrometer (QE65000; Ocean Optics) was integrated with a fluorescence microscope (IX72; Olympus) and fluorescence signals of QDs were acquired by scanning each stripe. At least three areas were scanned from each stripe. (B) The autofluorescent (AF) signals are removed from the protein derived signals by subtracting.