

## **Supplemental 1**

### **Supplemental Method:**

#### **Quantitative real-time RT-PCR (RT-Q-PCR)**

Total RNA was isolated from cultured cells by using RNeasy micro kit (#74004, QIAGEN) according to the manufacturer's instructions. cDNA was synthesized by reverse transcription (RT) with ThermoScript™ RT-PCR system (Invitrogen) according to the manufacturer's instructions. Quantitative real-time PCR was performed with iCycle iQ real-time PCR detection system (Bio-Rad Lab, Hercules, CA) using SYBR Green Master Mix (#204143, QIAGEN). The mRNA levels of genes were quantified by measuring the threshold cycle (*C<sub>t</sub>*) and were adjusted with the level of 18S for each sample. All primers used for PCR and RT-Q-PCR in this study were listed in supplemental Table 1.

**Immunocytochemistry (IHC) and Immunofluorescence (IF).** Cells were grown in 8-well chamber slides until 80% confluence, then fixed with 4% paraformaldehyde at 4°C for 10 min followed by incubation in 100% methanol at -20°C for 20 min. The slides were incubated with E-cadherin antibody (Cell Signaling) for overnight and IHC was performed using ABC kit (PK-6200, Vector Laboratories) followed by DAB kit (SK-4100, Vector Laboratories) according to the manufacturer's instruction. The IF was performed by incubating the slides with  $\beta$ -catenin (BD Transduction Lab) and N-cadherin (Santa Cruz Biotechnology, Inc) antibodies for overnight followed by incubating with FITC fluorescence-conjugated secondary antibodies for 30min and then mounted with VECTASHIELD mounting medium. The cells with positive staining were counted in five different areas under a fluorescence microscope and adjusted with total number of cells using DigiPro software (Labomed, Inc.). IF for HER2 was performed by incubating the slides with FITC fluorescence-conjugated HER2 antibody (Cat#: 340553, BD Biosciences) and mounted with propidium iodide mounting medium.