Electronic Supplementary Material (ESI) for MedChemComm.

Identifying an Inhibitory Mechanism of Apigenin on the Insulin Ligand-Receptor Binding

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Supplementary Materials

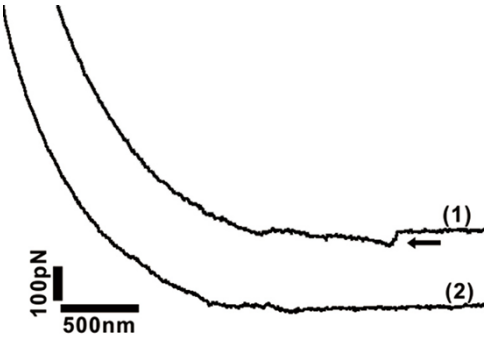

Figure S1. Representative force curves obtained with insulin-modified (1) or unmodified (2) AFM tips on MDA-MB-231 cells.

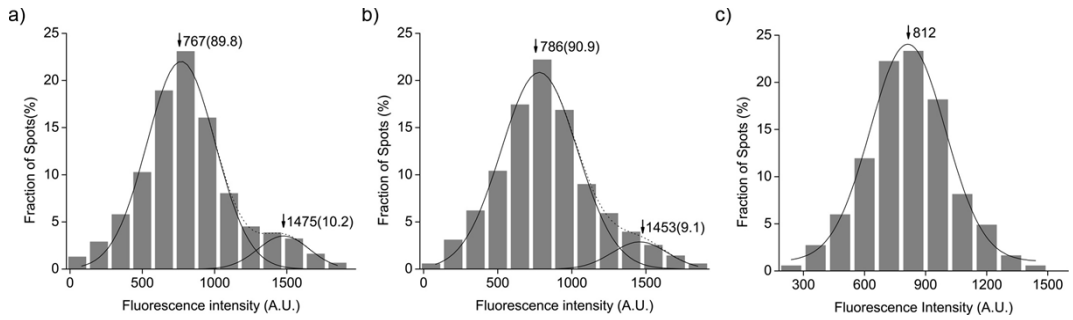

Figure S2. (a-b) Single-molecule fluorescence imaging of IR-GFP monomers and dimers. Distribution of the fluorescence intensity of spots from the non-stimulated cells with vehicle (0.1% DMSO) (a) and 50 μM apigenin (b). (c) Distribution of the fluorescence intensities of single GFP molecules imaged on coverslips. The solid curves show the fitting of a Gaussian function and the arrowheads indicate the peak positions. Numbers in parentheses represent the corresponding fractions.

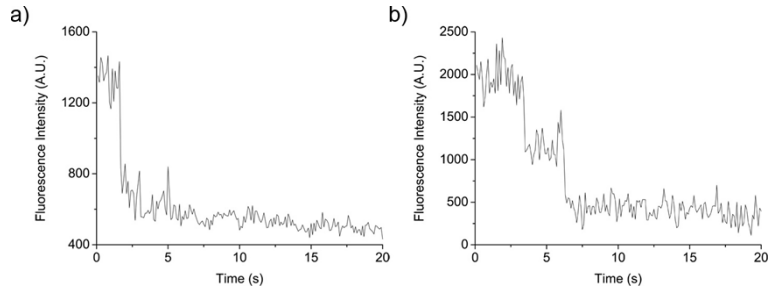

Figure S3. Two representative time courses of IR-GFP emission after background correction show one-step bleaching for monomers (a) and two-step bleaching for dimers (b).

Figure S4. Evaluation of apigenin on insulin receptor signaling. Immunoblotting analysis of phosphorylated insulin receptor (p-IR), phosphorylated Akt (p-Akt), insulin receptor (IR) and Akt. Cells were pretreated with 0.1% DMSO (vehicle) or 50 μM apigenin and stimulated with insulin for 30 min.

Supplementary Movie 1: Imaging of IR-GFP molecules on the cell membrane of live MDA-MB-231 cells. Duration time is 20 seconds**.**