Supplementary information

Enzyme-activated anchorage of peptide probes on plasma membrane for selectively lighting up target cells

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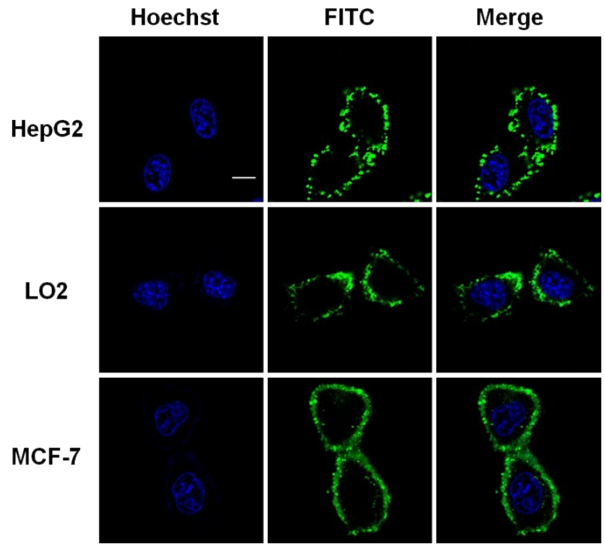

Figure S1. CLSM images of HepG2, LO2 and MCF-7 cells after the incubation with the MIP (20 μM) at 37 ºC for 2 h. The three columns are blue channel (Hoechst 33342), green channel (FITC), and merge of blue and green channels. Scale bar, 10 μm.

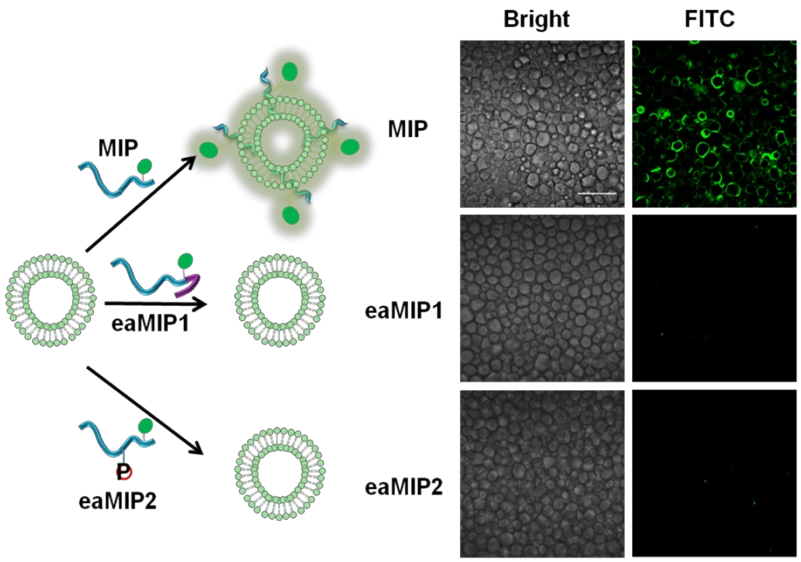

Figure S2. CLSM images of the vesicles after the incubation with different peptide probes (5 μM) under a large field of view. Scale bar, 50 μm.

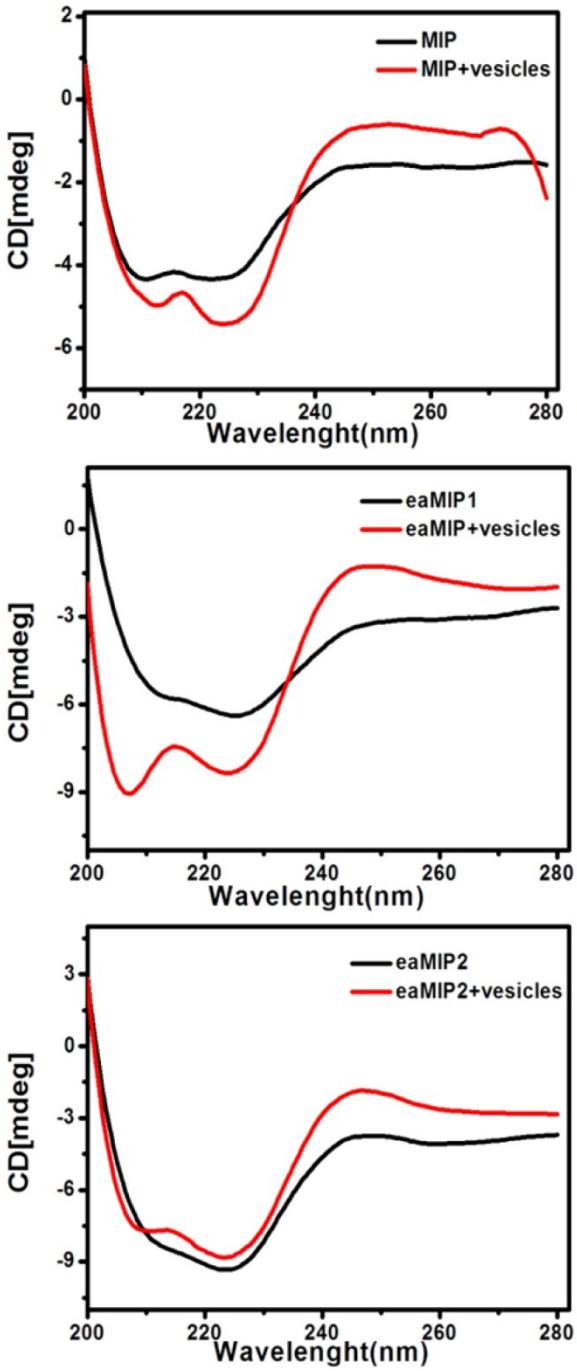

Figure S3. CD spectra of MIP, eaMIP1 and eaMIP2 before and after the incubation with vesicles. Peptide probes (10 μM) were incubated with 2 mg/mL empty versicles for 2 h before the CD measurements. The two negative bands around 210 nm and 224 nm are the characteristic absorption peaks of α-helix secondary structure (H. Pan, et al. FASEB J., 2010, **24,** 2928-2937.).

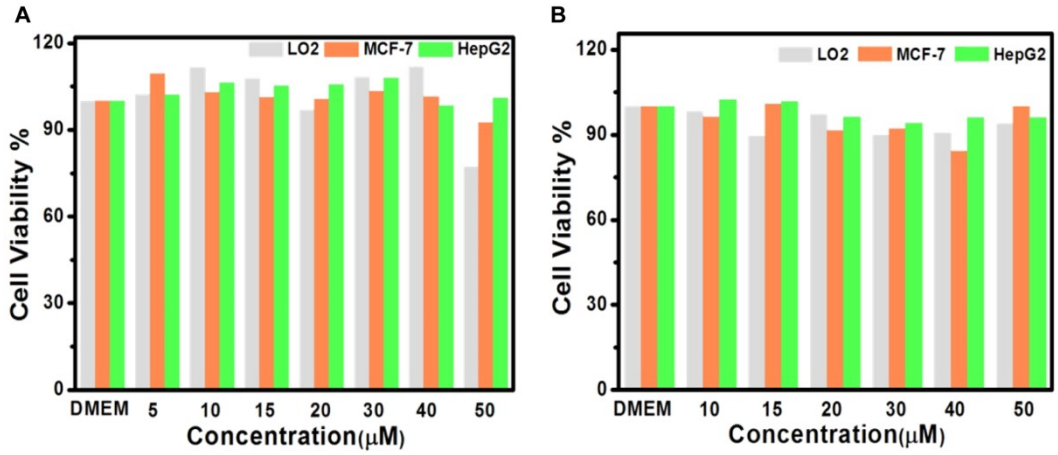

Figure S4. Cytotoxicity of eaMIPs on LO2, MCF-7 and HepG2 cells. Cell viability of cells after the incubation with (a) eaMIP1 and (b) eaMIP2 with different concentrations for 12 h.

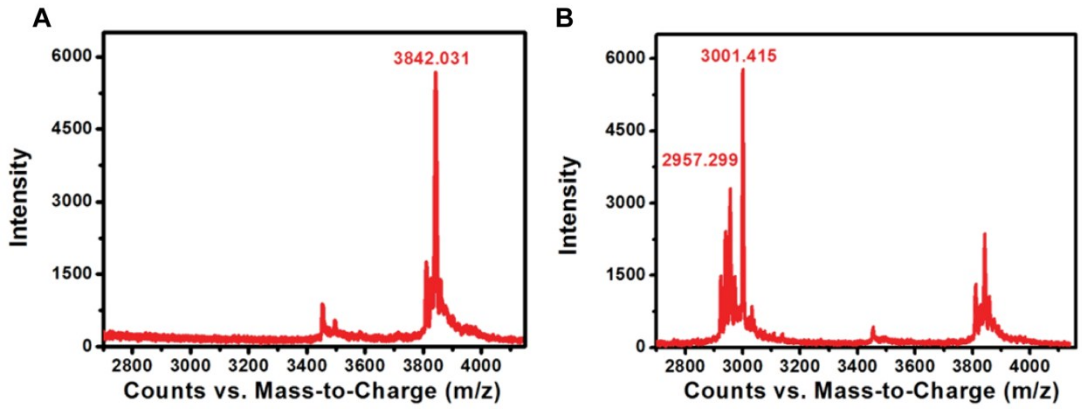

Figure S5. MALDI-TOF spectra of eaMIP1 (A) before and (B) after the treatment with MMP2.

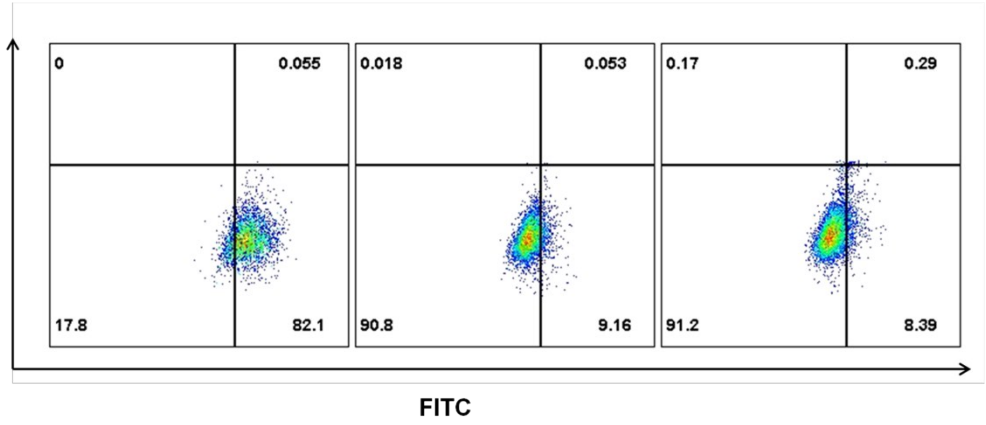

Figure S6. Flow cytometric analysis of HepG2, MCF-7 and LO2 cells after incubating with eaMIP1 (20 μM) at 37 ºC for 2.5 h.

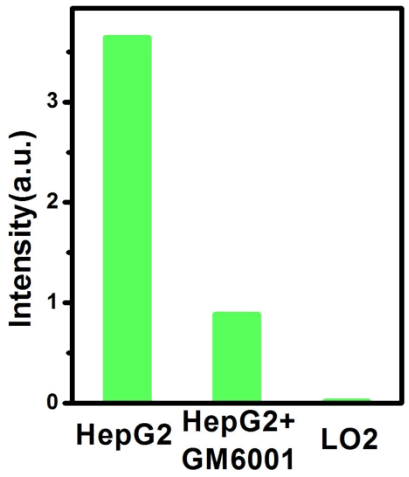

Figure S7. Average intensity of FITC channel on the membrane of HepG2 and LO2 cells. HepG2 cells were incubated with the eaMIP1 (20 μM) in the absence or presence of GM6001 (100 μM), and LO2 cells were incubated with the eaMIP1 at 37 ºC for 2 h. The average green fluorescence intensity on cells membrane surface in the microscopic images were quantified by Image J software.

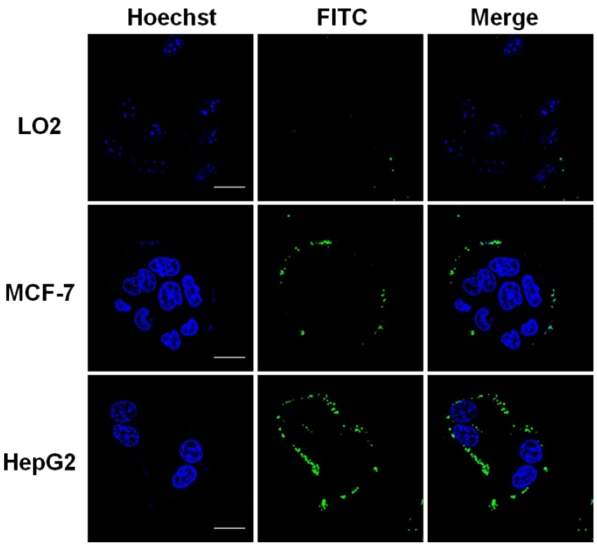

Figure S8. CLSM images of LO2, MCF-7 and HepG2 cells after incubation with the eaMIP2 (20 μM) at 37 ºC for 2.5 h. The three columns are blue channel (Hoechst 33342), green channel (FITC), and merge of blue and green channels. Scale bar, 20 μm.

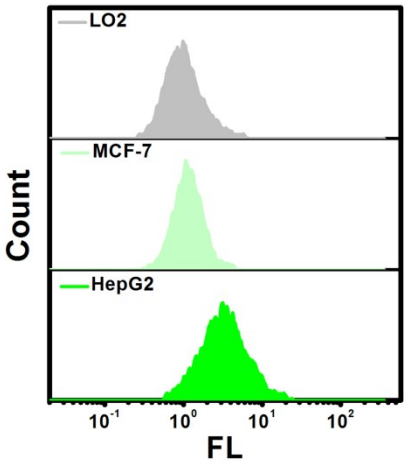

Figure S9. Flow cytometry analysis of the LO2, MCF-7 and HepG2 cells after the incubation with the eaMIP2 (20 μM) at 37 ºC for 2.5 h.