Synthesis of Multi-Stimuli Responsive Drug Carrier for Selective Drug Release to Tumor Microenvironment

문석준, 김현웅, 최대건[1], 이현지, 봉기완†
고려대학교; [1]인천대학교
(bong98@korea.ac.kr†)

Multi-stimuli responsive drug carriers have been actively researched for controlled drug release in complex tumor microenvironments. In addition to the stimuli responsive drug release, combinatorial chemotherapy is essential to increase therapeutic effects. However, previous studies have shown limitation in the synthesis of multi-compartmental drug carriers that can encapsulate multiple drugs and release each drug in a controlled manner. Here, we report multi-stimuli responsive drug carriers containing pH- and redox-sensitive multi-compartments. The drug carriers were created by stop flow lithography that can be used to synthesize multi-compartmental particles. The carriers exhibited independent drug release upon exposure to the corresponding stimulus.