Supplementary material

Development of beta-carotene-loaded poly(lactic acid)/hydroxyapatite core-shell nanoparticles for osteoblast differentiation

Sungho Lee, Yoshihiko Sugimoto, Katsuya Kato, Tatsuya Miyajima, Makoto Sakurai, Fukue Nagata

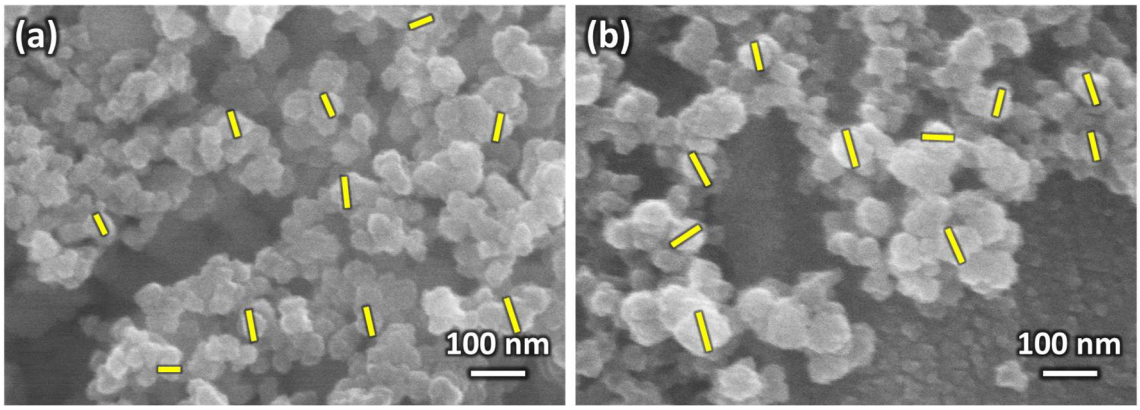

Figure S1. Representative markers (yellow line) for measuring the particle diameter using Image J. (a) BC0/HAp, (b) BC0.5/HAp.

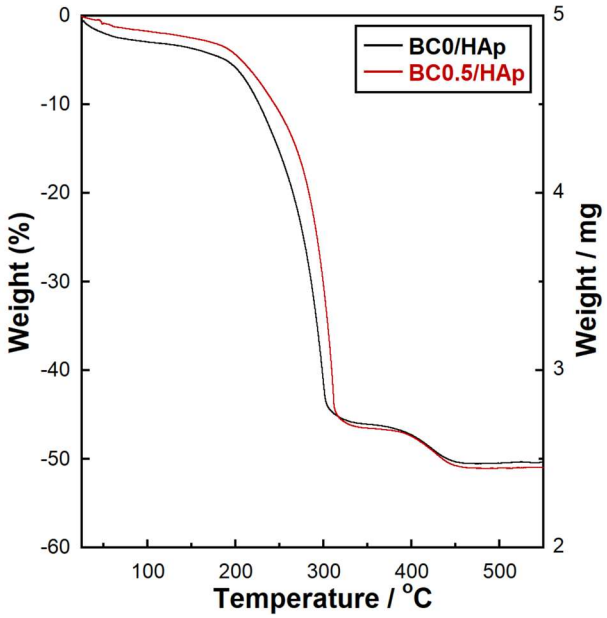

Figure S2. Thermogravimetric analysis of BC*x*/HAp.

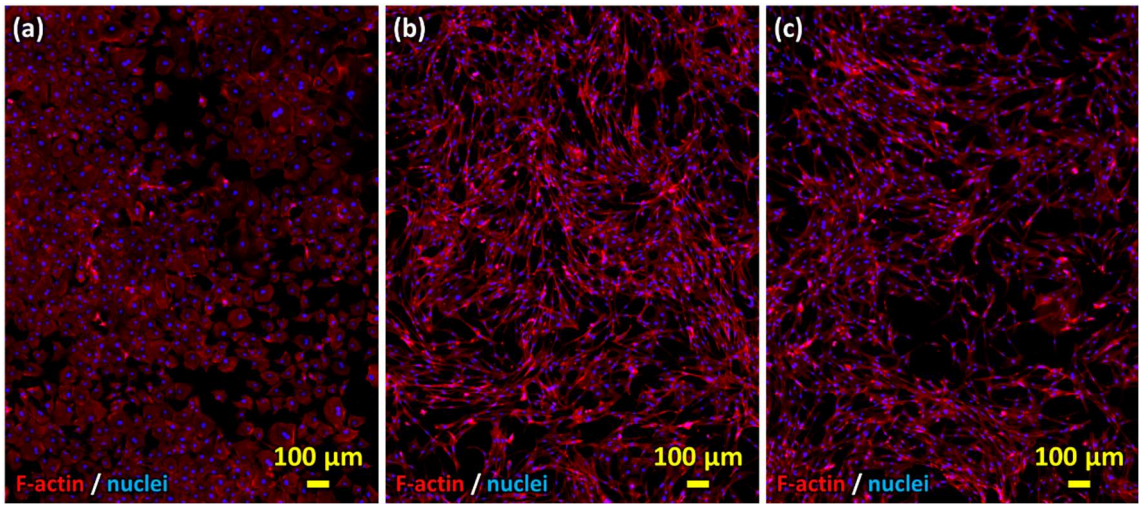

Figure S3. Fluorescence images of MC3T3-E1 cells cultured with (a) culture medium (control), (b) BC0/HAp-containing medium, and (c) BC0.5/HAp-containing medium for 96 h. MC3T3-E1 cells were seeded (2.0×10^4 cells/mL in 500 µL of culture medium) onto a cover glass (φ 15 mm) in a 24-well plate and incubated for 24 h. Next, the medium was replaced with the culture medium (as the control) and BC*x*/HAp-containing medium, and cultivated for an additional 96 h. Further fluorescence staining process as described in section 2.4.

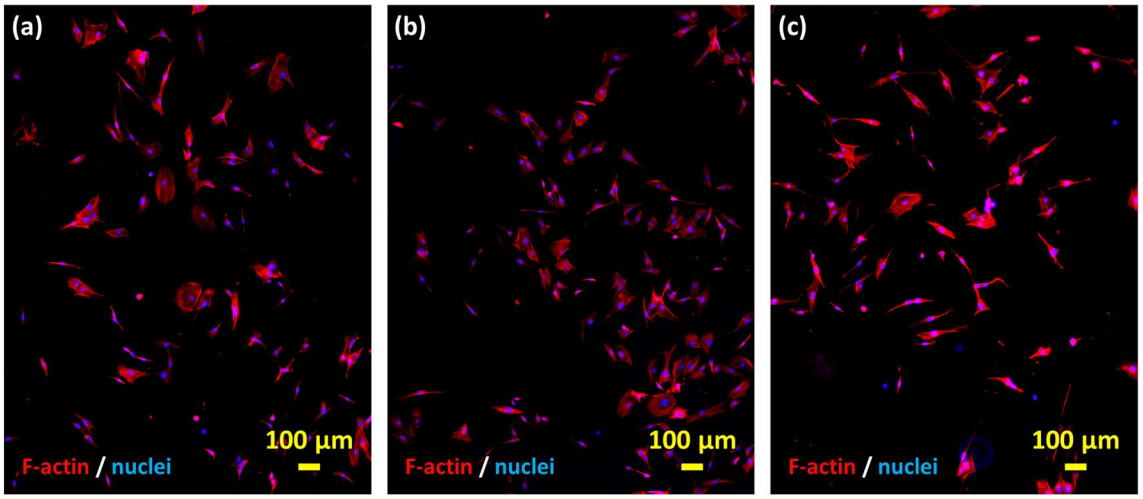

Figure S4. Fluorescence images of MC3T3-E1 cells cultured with (a) BC0/HAp-, (b) BC0.5/HAp-, and (c) HAp (HAP-100, Taihei Chemical Industrial)-containing medium for 24 h. MC3T3-E1 cells were seeded (0.5×10^4 cells/mL in 500 µL of culture medium) onto a cover glass (φ 15 mm) in a 24-well plate and incubated for 24 h. Next, the medium was replaced with the BC*x*/HAp- and HAp-containing medium, and cultivated for an additional 24 h. Further fluorescence staining process as described in section 2.4.