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Facile Fabrication of Varisized Calcium Carbonate Microspheres as

Vaccine Adjuvant

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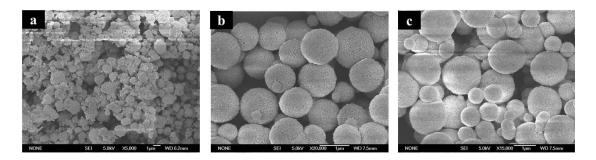
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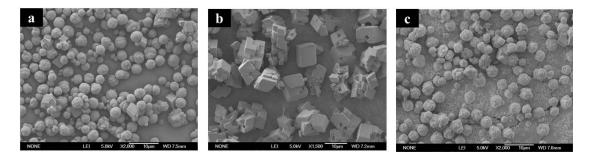
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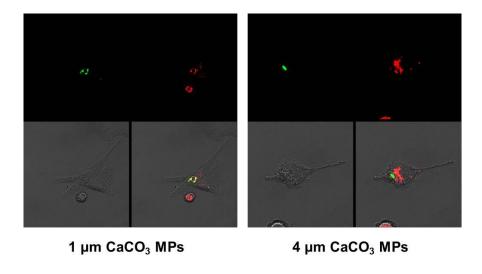
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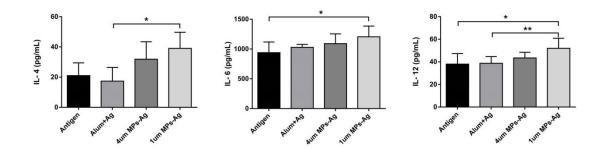
**Figure S1.** SEM images of CaCO<sub>3</sub> particles synthesized in different ultrasonicating power: (a) 140 W; (b) 200 W; (c) 320 W.



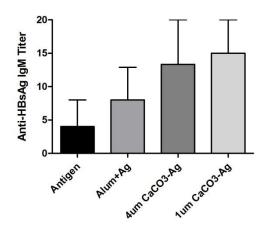
**Figure S2.** The morphology transformation of CaCO<sub>3</sub> particles. (a) SEM images when the CaCO<sub>3</sub> MPs were fabricated; (b) the images of CaCO<sub>3</sub> particles in the water 6 day after fabrication; (c) the photos of CaCO<sub>3</sub> particles freeze-dried for 6 months.



**Figure S3.** Qualitative analyses of MP-mediated antigen internalization into DCs by CLSM. Antigens were labeled by FITC (green points); lysosomes were labeled by Lyso-Tracker Red (red points).



**Figure S4.** Cytokines (IL-4, IL-6 and IL-12) secretion of BMDCs stimulated with different formulations for 24 h.



**Figure S5.** Serum anti-HBsAg IgM levels in mice immunized with different formulations on day 7 after primary immunization.