Supplementary Information

Improved osteogenesis and angiogenesis of magnesium-doped calcium phosphate cement via macrophage immunomodulation

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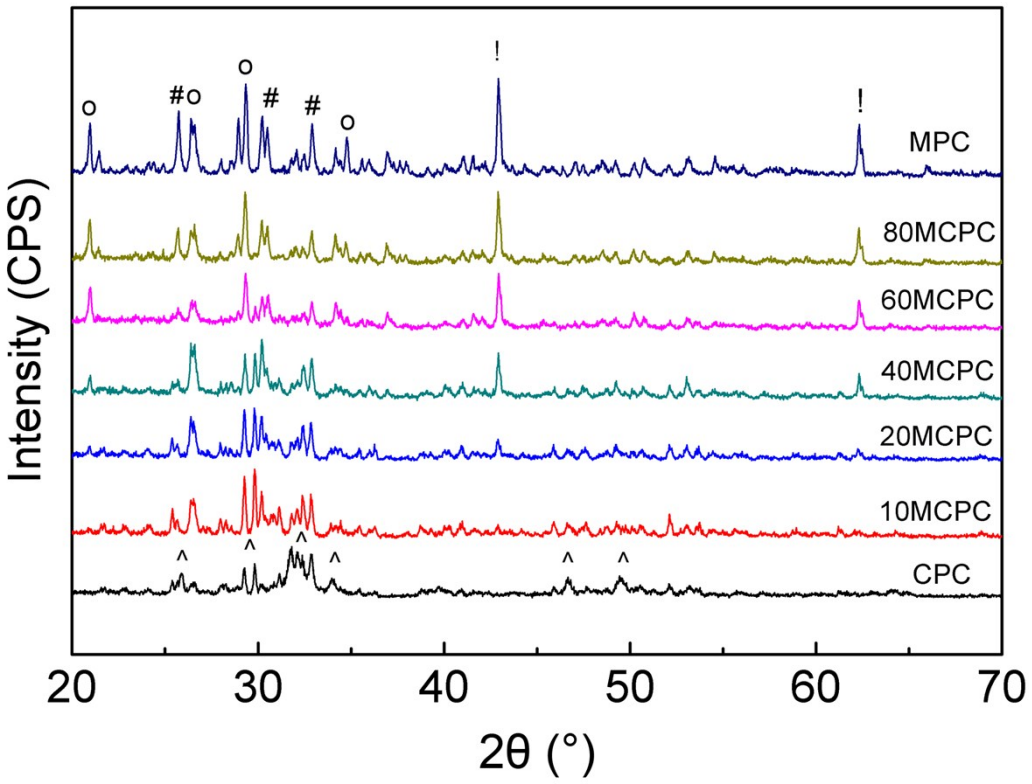

Fig. S1 XRD patterns of CPC, MCPCs and MPC after setting for 3 days. ^: Hydroxyapatite. o: $Ca_3(PO_4)_2$. #: $Mg_2(PO_4)_3$. !: MgO. The cement samples were grinded after setting for 3 days and then analyzed by X-ray diffraction (XRD, Rigaku D/Max 2550, Cu Kα radiation, Japan). CPC displayed typical peaks of hydroxyapatite (HA), while MPC contained peaks of magnesium phosphate ($Mg_3(PO_4)_2$) and calcium phosphate ($Ca_3(PO_4)_2$) with the residual of MgO.

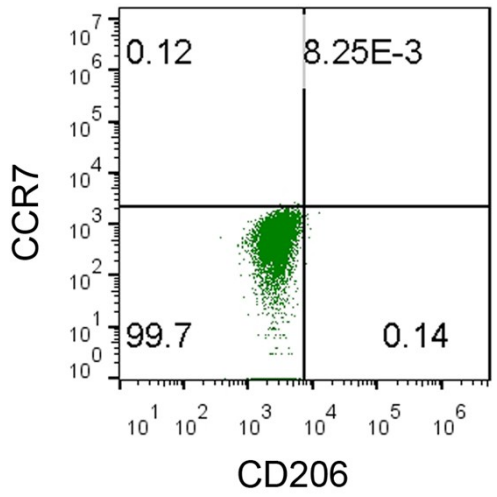

Fig. S2 Isotype control of RAW 264.7 cells in flow cytometry. Cells were stained with Alexa Fluor® 647 rat IgG2a, κ and Alexa Fluor® 488 rat IgG2a, κ.

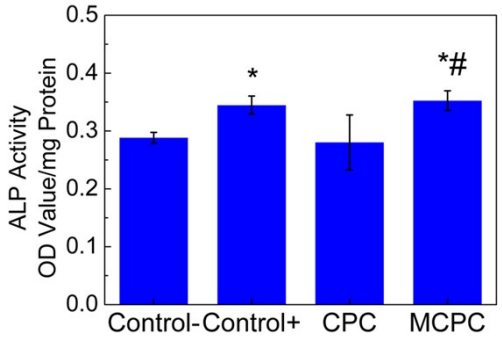

Fig. S3 The ALP activity of BMSCs in transwell co-culture system on day 7. *: Significant difference ($p < 0.05$) for Control+, CPC and MCPC groups compared with Control-. #: Significant difference ($p < 0.05$) for MCPC group compared with CPC group.

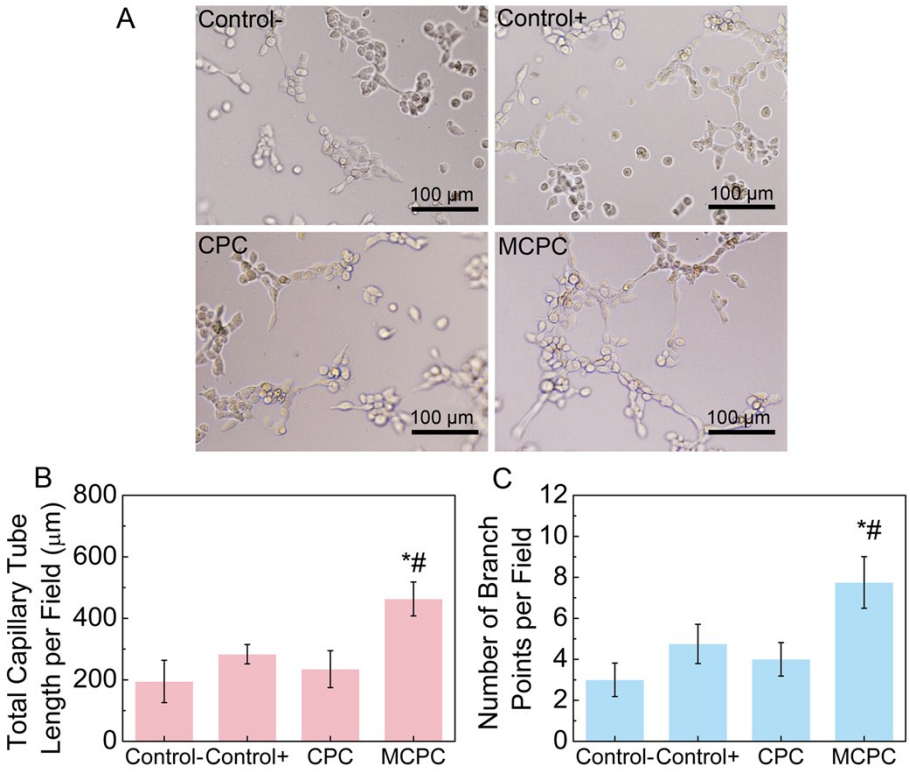

Fig. S4 Representative images of *in vitro* sprouting of HUVECs cultured in transwell inserts (A), quantitative analysis of the total capillary tube length (B) and number of branch points (C). *: Significant difference ($p < 0.05$) for Control+, CPC and MCPC groups compared with Control-. #: Significant difference ($p < 0.05$) for MCPC group compared with CPC group.