## Supplemental data





## Figure S1.

Repeated TGF- $\beta$ 1 administration inhibits expression of osteoblast differentiation markers in HPDL cells and hMSC in the presence of serum. A, HPDL cells were cultured in OBM (1), OBM with a single administration of 1 ng/ml TGF- $\beta$ 1 (2), OBM with a double administration of 1 ng/ml TGF- $\beta$ 1 (3) for 3 days in the presence of 5 % fetal bovine serum (FBS). ALP activity (upper panel) and IGF-1 mRNA expression (lower panel) were inhibited by repeated treatment of TGF- $\beta$ 1. B, hMSC was cultured in OBM (1), OBM with a single administration of 1 ng/ml TGF- $\beta$ 1 (2), OBM with a triple administration of 1 ng/ml TGF- $\beta$ 1 (3) for 4 days in the presence of 10 % FBS. ALP activity (upper panel) and IGF-1 mRNA expression (lower panel) were inhibited by repeated treatment of TGF- $\beta$ 1. Expression of IGF-1 gene was analyzed by qRT-PCR and the mRNA levels were normalized to that of 18S rRNA and measured in triplicate. Values represent mean ± S.E. (n = 4). Bonferroni correction for multiple comparisons was applied. <sup>#</sup>P < 0.01, \*P < 0.001.