Table S1. Comparison of gender and age of control and osteoporosis group in cancellous and peripheral blood. *P < 0.05 was considered statistically significant.

	Gender (male/female)	Age (yo)
Cancellous		
Control	3/8	61.2±10.2
Osteoporosis	2/6	62.5±5.9
P Value	0.912	0.748
Peripheral		
Control	4/12	62.9±9.8
Osteoporosis	2/5	63.4±6.2
P Value	0.858	0.892

Table S2. Comparison of gender and age of cancellous and peripheral group. *P < 0.05 was considered statistically significant.

	Gender (male/female)	Age (yo)
Cancellous	5/14	61.7±8.5
Peripheral	6/17	63.0±8.7
P Value	0.987	0.627

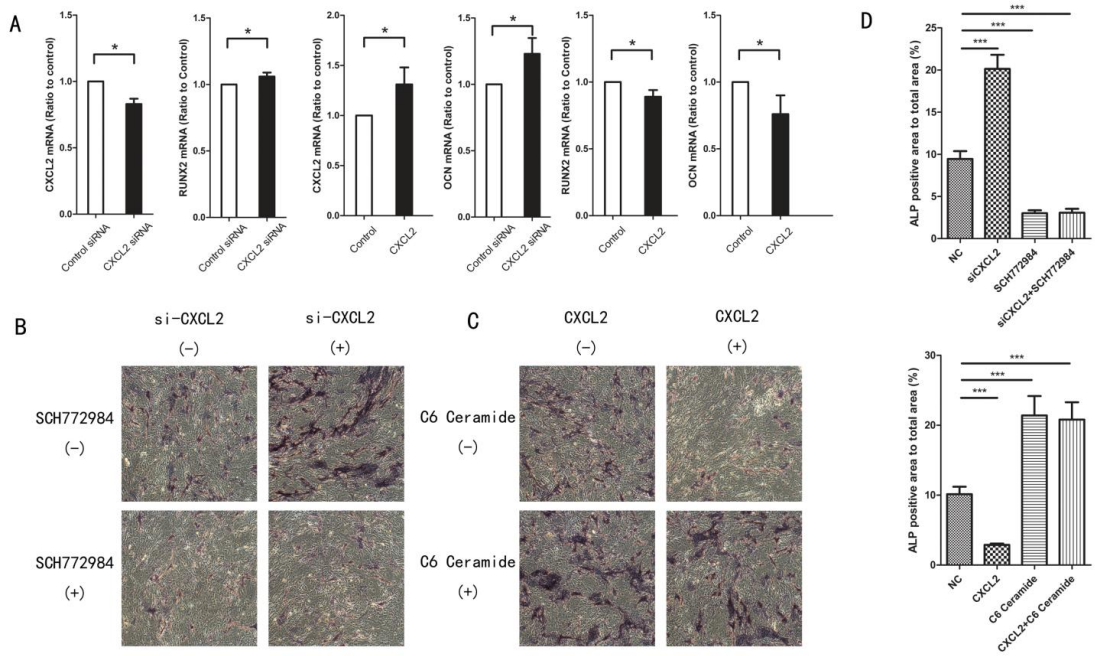

Fig. S1. CXCL2 Attenuates Osteoblasts Differentiation by Inhibiting ERK Signaling Pathway. (A) mRNA expression of CXCL2, RUNX2 and OCN in primary culture osteoblasts from qPCR analysis. To down-regulate CXCL2, cells were transfected with negative control siRNA or CXCL2 siRNA; to up-regulate CXCL2, cells were treated with pCMV-Flag-NC or pCMV-Flag-CXCL2. RNA was isolated 24 hours after transfection. n=6 per group. (B) ALP staining on the 7th day under inducing condition in siRNA CXCL2 transfected MC3T3-E1 cells and co-treated with SCH7729984. (C) ALP staining on the 7th day under inducing condition in pCMV-Flag-CXCL2 transfected MC3T3-E1 cells and co-treated with C6 ceramide. (D) quantitative analysis of ALP positive MC3T3-E1s out of total MC3T3-E1s under specific condition. *P < 0.05, **P < 0.001, ***P < 0.0001.