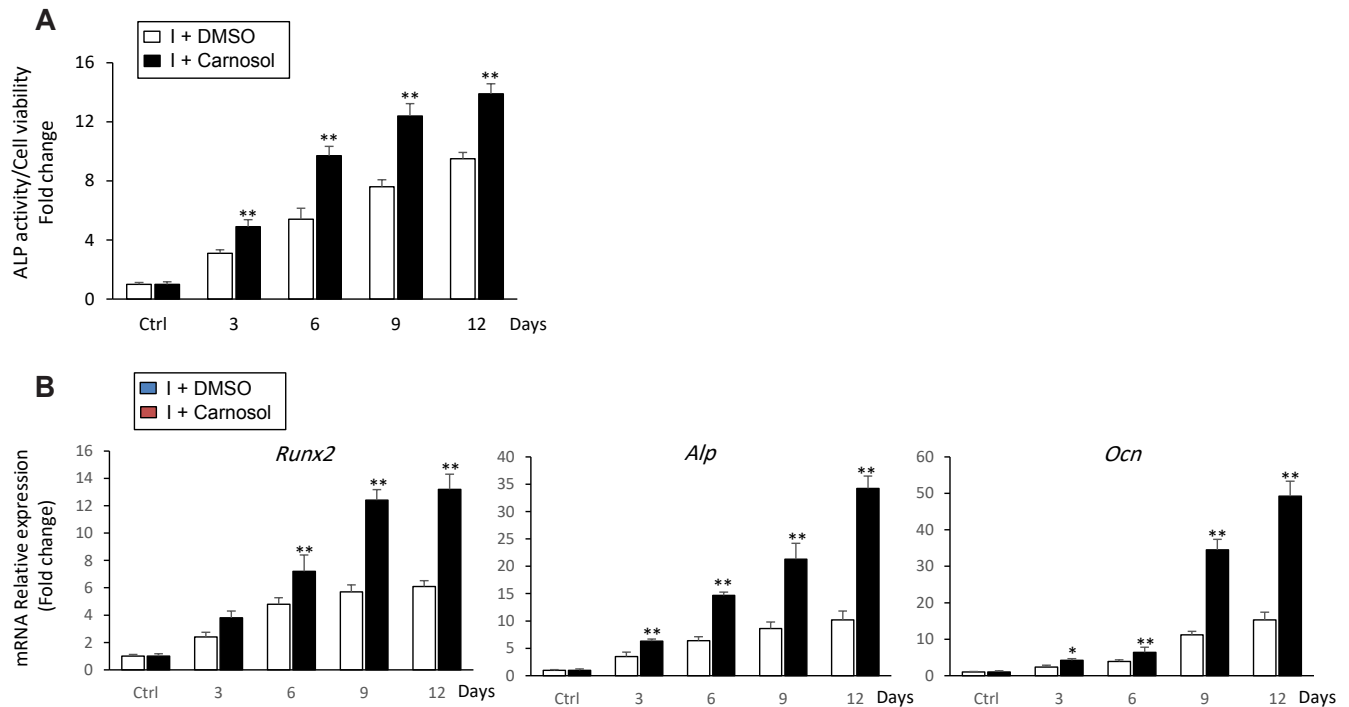
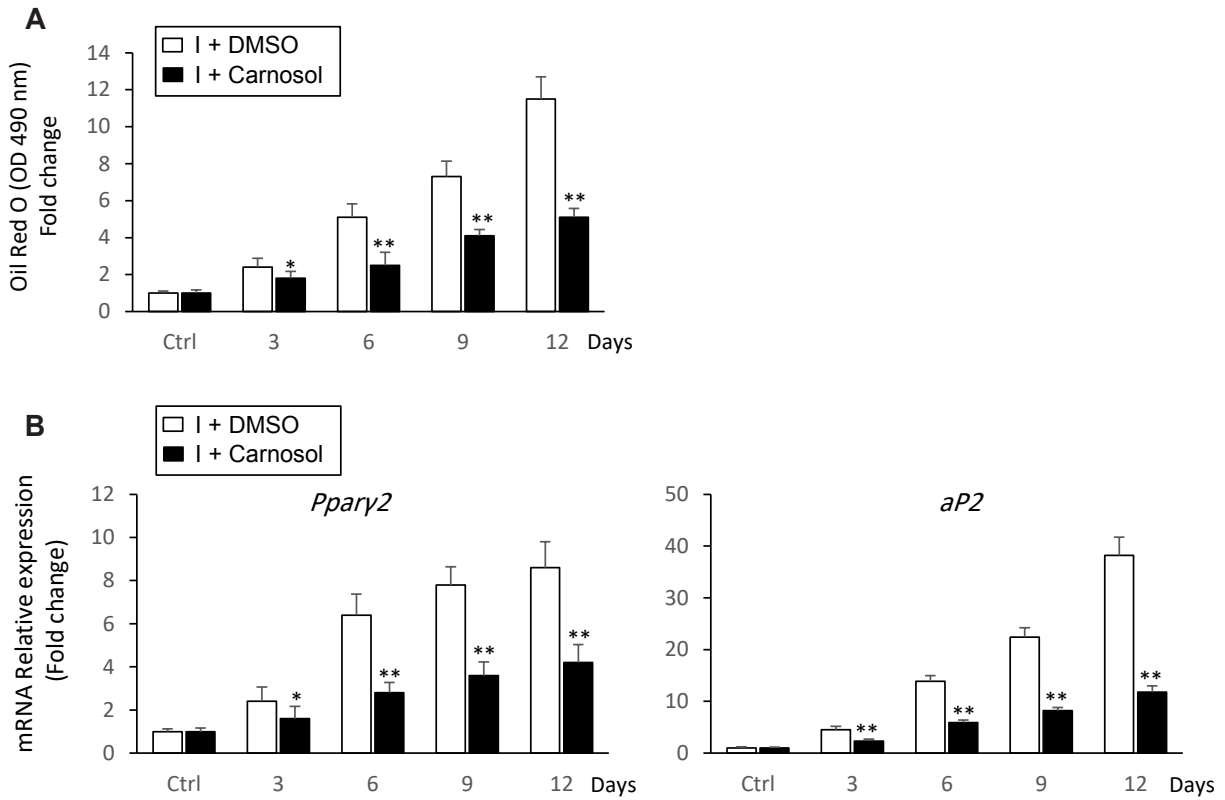


Supplementary Table 1. List of primers used for qPCR

Gene name	Forward primer 5'-3'	Reverse Primer 5'-3'
<i>β-Actin</i>	GAT ATC GCT GCG CTG GTC GTC	ACG CAG CTC ATT GTA GAA GGT GTG G
<i>Hprt</i>	TCAGTCAACGGGGGACATAAA	GGGGCTGTACTGCTTAACCAG
<i>PPAR-γ</i>	GGG TCA GCT CTT GTG AAT GG	CTG ATG CAC TGC CTA TGA GC
<i>C/ebp-α</i>	AAG CCA AGA AGT CGG TGG A	CAG TCC ACG GCT CAG CTG TTC
<i>aP2</i>	CAA AAT GTG TGA TGC CTT TGT G	CTC TTC CTT TGG CTC ATG CC
<i>Lpl</i>	CTGCTGGCGTAGCAGGAAGT	GCTGGAAAGTGCCTCCATTG
<i>Runx2</i>	AGC AAC AGC AAC AAC AGC AG	GTA ATC TGA CTC TGT CCT TG
<i>Ocn</i>	CAG ACA AGT CCC ACA CAG CA	CTT TAT TTT GGA GCT GCT GT
<i>Alp</i>	GCC CTC TCC AAG ACA TAT A	CCA TGA TCA CGT CGA TAT CC
<i>Opn</i>	GAA ACT CTT CCA AGC AAT TC	GGA CTA GCT TGT CCT TGT GG
<i>Msx2</i>	CCATATACGGCGCATCCTACC	CAACCGGCGTGGCATAGAG
<i>Dlx5</i>	CTGGCCGCTTTACAGAGAAG	CTGGTGA CTGTGGCGAGTTA



Supplementary Fig. 1. The stimulatory effect of carnosol on osteogenesis at different time points during the differentiation course. (A) The stimulatory effect of carnosol (10 μ M) on ALP activity during the time course of osteoblast differentiation of mBMSCs. Cells were either non-induced (control, ctrl), or induced with OIM in the absence (I) or the presence of carnosol, and ALP activity quantifications were performed at different time points during differentiation. (B) QPCR analysis of osteogenic genes (*Runx2*, *Alp*, and *Ocn*) expression upregulated by carnosol in mBMSCs during the time course of osteoblast differentiation. Gene expression values were normalized to reference genes and represented as fold change over I+DMSO. Values are mean \pm standard deviation of three independent experiments, * $p < 0.05$, ** $p < 0.005$ compared to I+DMSO cells. ALP, alkaline phosphatase; OIM, Osteogenic-induction medium; QPCR, quantitative real-time PCR.



Supplementary Fig. 2. The inhibitory effect of carnosol on adipogenesis at different time points during the differentiation course. (A) The inhibitory effect of carnosol (10 μ M) on Oil Red O staining for lipid accumulation during the time course of adipocyte differentiation of mBMSCs. Cells were induced to differentiate into adipocyte in the presence of DMSO (I+DMSO) or carnosol and Oil Red O staining was quantified at different time points. (B) QPCR analysis of the expression of adipocytic markers (*Pparγ2* and *aP2*) during the time course of adipogenesis of mBMSCs in the presence of carnosol (10 μ M). Values are mean \pm standard deviation of three independent experiments, * p < 0.05, ** p < 0.005 compared to I+DMSO cells. mBMSCs, mouse bone marrow-derived mesenchymal stem cells; QPCR, quantitative real-time PCR.