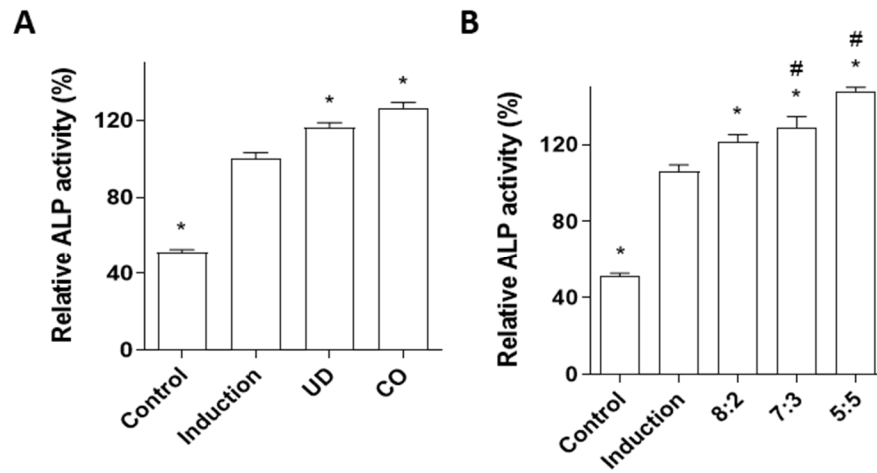


Inhibitory Effect of *Ulmus davidiana* and *Cornus officinalis* extracts in vitro and in vivo

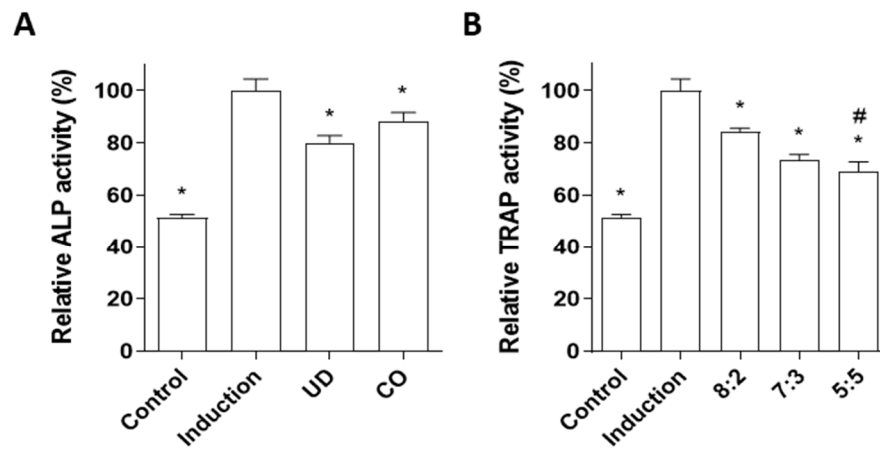
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Supplementary Table S1. Gene specific primers used in this study.

Gene	Primer sequence
<i>Alpl</i>	Forward: 5'-TCC CAC GTT TTC ACA TTC GG-3' Reverse: 5'-CCC GTT ACC ATA TAG GAT AGC C-3'
<i>Runx2</i>	Forward: 5'-TAA AGT GAC AGT GGA CGG TCC C-3' Reverse: 5'-AAT GCG CCC TAA ATC ACT GAG G-3'
<i>Bglap</i>	Forward: 5'-TAG TGA ACA GAC TCC GGC GCT A-3' Reverse: 5'-TGT AGG CGG TCT TCA AGC CAT-3'
<i>Ctsk</i>	Forward: 5'-AAT ACC TCC CTC TCG ATC CTA CA-3' Reverse: 5'-TGG TTC TTG ACT GGA GTA ACG TA-3'
<i>Acp5</i>	Forward: 5'-TGG TAT GTG CTG GCT GGA AAC-3' Reverse: 5'-GCA GAG GCA TAC TTG TAC CG-3'
<i>Mmp9</i>	Forward: 5'-GCA GAG GCA TAC TTG TAC CG-3' Reverse: 5'-TGA TGT TAT GAT GGT CCC ACT TG-3'
<i>Nfatc1</i>	Forward: 5'-GGA GAG TCC GAG AAT CGA GAT-3' Reverse: 5'-TTG CAG CTA GGA AGT ACG TCT-3'
<i>Gapdh</i>	Forward: 5'-AGG TCG GTG TGA ACG GAT TTG-3' Reverse: 5'-TGT AGA CCA TGT AGT TGA GGT CA-3'
<i>Hprt</i>	Forward: 5'-GAG GAG TCC TGT TGA TGT TGC CAG-3' Reverse: 5'-GGC TGG CCT ATA GGC TCA TAG TGC-3'



Supplementary Figure S1. Effects of single UD, CO extract and their combination on ALP activity in mouse preosteoblast MC3T3-L1 cells. Preosteoblast MC3T3-E1 cells were co-treated with osteoblast induction medium and 10 $\mu\text{g/mL}$ of (A) single UD, CO extract or (B) their combinations (8:2, 7:3 and 5:5). ALP activity was assessed using p-nitrophenylphosphate. UD; UD treatment, CO; CO treatment, * $p < 0.05$ vs. Induction, # $p < 0.05$ vs. 8:2 (one-way ANOVA with Tukey's HSD post hoc test).



Supplementary Figure S2. Effects of single UD, CO extract and their combination on TRAP activity in mouse primary osteoclasts. Mouse primary monocytes were co-treated with osteoclast induction medium and 10 $\mu\text{g/mL}$ of UD, CO extract or their combination (8:2, 7:3 and 5:5) for 5 days. TRAP activity was measured using Acid-Phosphatase Kit. UD; UD treatment, CO; CO treatment, * $p < 0.05$ vs. Induction, # $p < 0.05$ vs. 8:2 (one-way ANOVA with Tukey's HSD post hoc test).