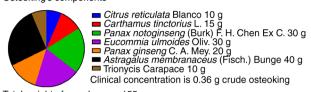
Figure S1. Components of osteoking. One complete dose of osteoking weighs 155 g and the clinical concentration is 0.36 g crude osteoking.

Osteoking's components



Total weight of one dosage=155 g

Figure S2. Components and relative targets of osteoking.

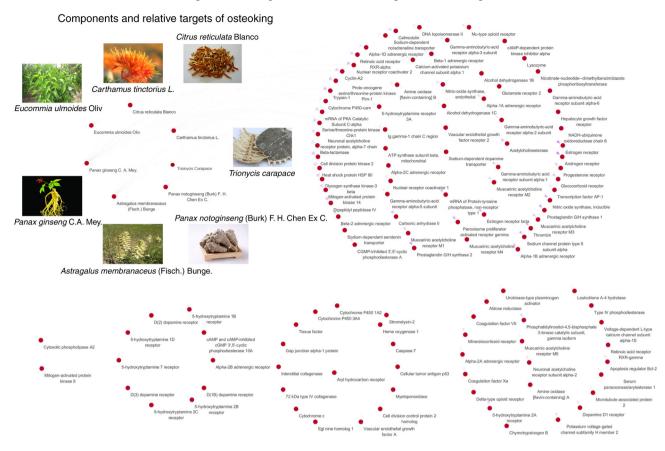


Figure S3. Proliferation of rBSMC following culture with different dilutions of osteoking. An MTS cell proliferation method was used and measured by microplate reader. The values are expressed as the mean  $\pm$  standard deviation (n=6). rBMSC, rat bone mesenchymal stem cell; neg-control, negative control; OD, optical density.

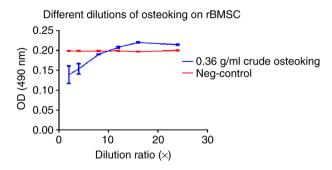


Figure S4. No reaction between HSP90- $\beta$  and Mgp analyzed by Bio-layer interferometry. HSP90- $\beta$  (ag28379) and Mgp (ag16682) were diluted in 0.1 mg/ml. The time of combination was 600 sec, and the time of dissociation was 1,200 sec. The red line represents HSP90- $\beta$  and the green line represents Mgp. The other lines represent blank probes. HSP90- $\beta$ , heat shock protein 90- $\beta$ ; Mgp, matrix Gla protein.

