## **Supporting Information and Figure Legends**



Figure S1. Phlpp1 expression in tissues of Phlpp1 cKO<sub>Ctsk</sub> mice. Phlpp1 cKO<sub>Ctsk</sub> mice and WT : Cre<sup>+</sup> littermates were aged to 12 weeks. Sections from paraffin embedded tissues were incubated with an isotype control IgG (left column) or an anti-PHLPP1 antibody (right column) and (A) 20X images of the growth plate and (B) cortical bone were acquired. (C) Expression of Phlpp1 in tissues derived from Phlpp1 cKO<sub>Ctsk</sub> and Cre<sup>+</sup> control littermates, Scale bars represent 200 microns. \*p<0.01.



**Figure S2.** Mineralization of Phlpp1 cKO<sub>Ctsk</sub> mice. Female Phlpp1 cKO<sub>Ctsk</sub> mice (n = 3) and Cre<sup>+</sup> control littermates (n = 3) were aged to 12-weeks and calcein injected four days and 24-hours prior to euthanasia. Femora were plastic embedded, sectioned and dynamic histomorphometry was performed to determine the (A) mineral apposition rate (MAR), (B) bone formation rate per bone surface (BFR/BS), (C) bone formation rate per bone volume (BFR/BV), and bone formation rate per total volume (BFR/VT). (E) Calvarial osteoblasts were collected from female and male P7 Phlpp1 cKO<sub>Ctsk</sub> mice and their WT littermates. Cells were cultured for 21 days in osteogenic conditions and Alizarin red staining was performed.