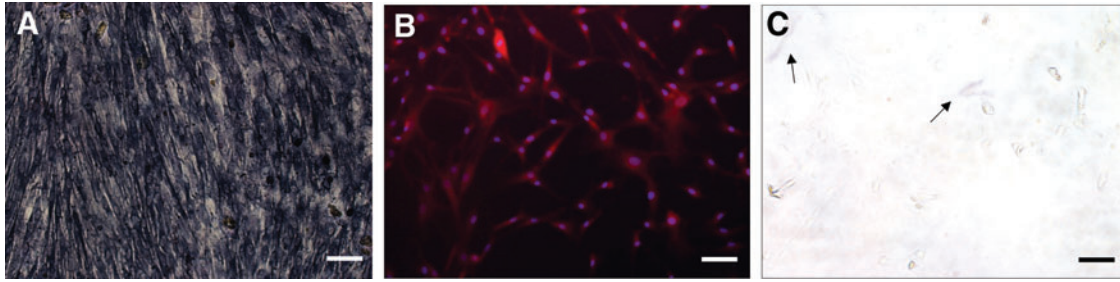


## Supplementary Data



**SUPPLEMENTARY FIG. S1.** Co-isolation and characterization of primary human osteoblastic and osteocytic cells. **(A)** Osteoblastic cells were isolated from early digestions of human bone chips, allowed to proliferate for 14 days, and stained for ALP activity to confirm osteoblastic phenotype. The majority of these cells were osteoblasts (81–95%) as evident by the majority of the cells staining positive for ALP activity. **(B)** Osteocytic cells were allowed to migrate out of deeply excavated human bone chips onto collagen-coated wells for 8 days and probed for sclerostin (*red*) to confirm osteocytic phenotype and counterstained with DAPI (*blue*). The majority of cells that migrated out of the bone chips were osteocytic ( $86.4\% \pm 5.9\%$ ), as evident by positive sclerostin staining. **(C)** A small population of cells that migrated out of the bone chips were osteoblastic ( $12.9\% \pm 5.6\%$ ), which showed very little ALP activity (*black arrows*) after 8 days. Scale bar = 50  $\mu\text{m}$ . ALP, alkaline phosphatase.