



**SUPPLEMENTARY FIG. S2.** Manipulation of SMAD3 and RUNX2 level by lentiviral delivery. (A) qRT-PCR shows efficiency of target shRNA. Student's *t*-test on log transformed values of fold changes,  $n=6$  ( $p=0.002$ ) (B) qRT-PCR shows upregulation of RUNX2 with lentiviral construct. Student's *t*-test on log transformed values of fold changes,  $n=6$  ( $p<0.0001$ ). Groups of *different letters* are statistically different from one another. (C) Representative raw image of transduced MSCs under bright-field and (D) red-fluorescent channel. Scale bar=400  $\mu\text{m}$ . qRT-PCR, quantitative real-time polymerase chain reaction.