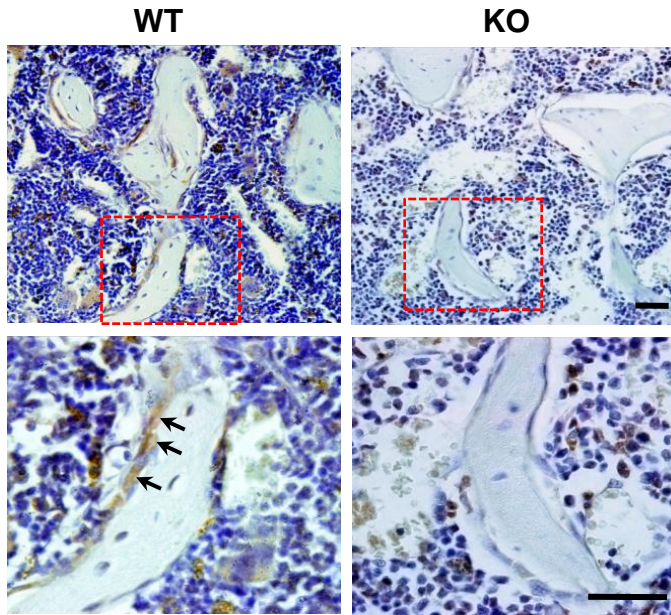# Fig. S1

WT KO

Fig. S1 Representative images of LRP6 protein expression in distal femurs from WT and KO mice detected by immunohistochemical analysis with an antibody against LRP6. Scale bars: 100μM. Arrows, LRP6$^+$ cells on bone surface.
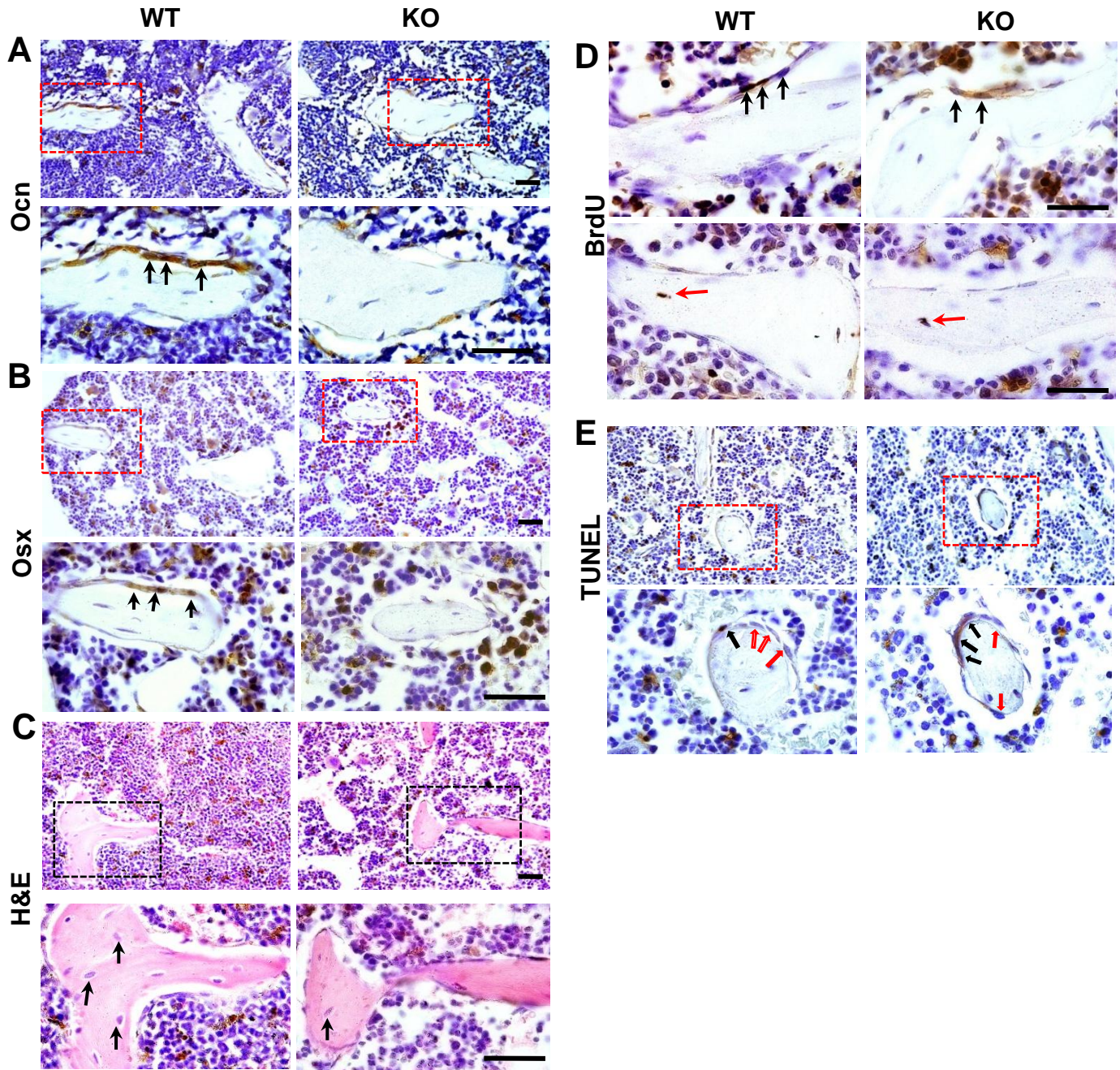
Fig. S2

Fig. S2 Immunohistochemical analysis of femur sections from 3 month-old WT and KO mice. (**A**) Immunohistochemical analysis of osteocalcin (Ocn). Arrows indicate Ocn[+] osteoblasts on bone surface. Scale bars: 100μM. (**B**) Immunohistochemical analysis of osterix (Osx). Arrows, Osx^{+} cells on bone surface. Scale bars: 100μM. (**C**) Light micrographs of H&E staining performed on trabecular bone sections from distal femora. Scale bars: 100μM. Arrows indicate osteocytes. (**D**) BrdU labeling. Scale bars: 100μM. Black arrows, BrdU^{+} cells on bone surface. Red arrows, BrdU^{+} cells embedded in bone matrix. (**E**) Immunohistochemical analysis of TUNEL^{+} cells in femur sections of 3 month-old WT and KO mice. Black arrow: TUNEL[+] osteoblasts, red arrow: TUNEL[-] osteoblasts. Scale bars: 100μM.

Fig. S3

A

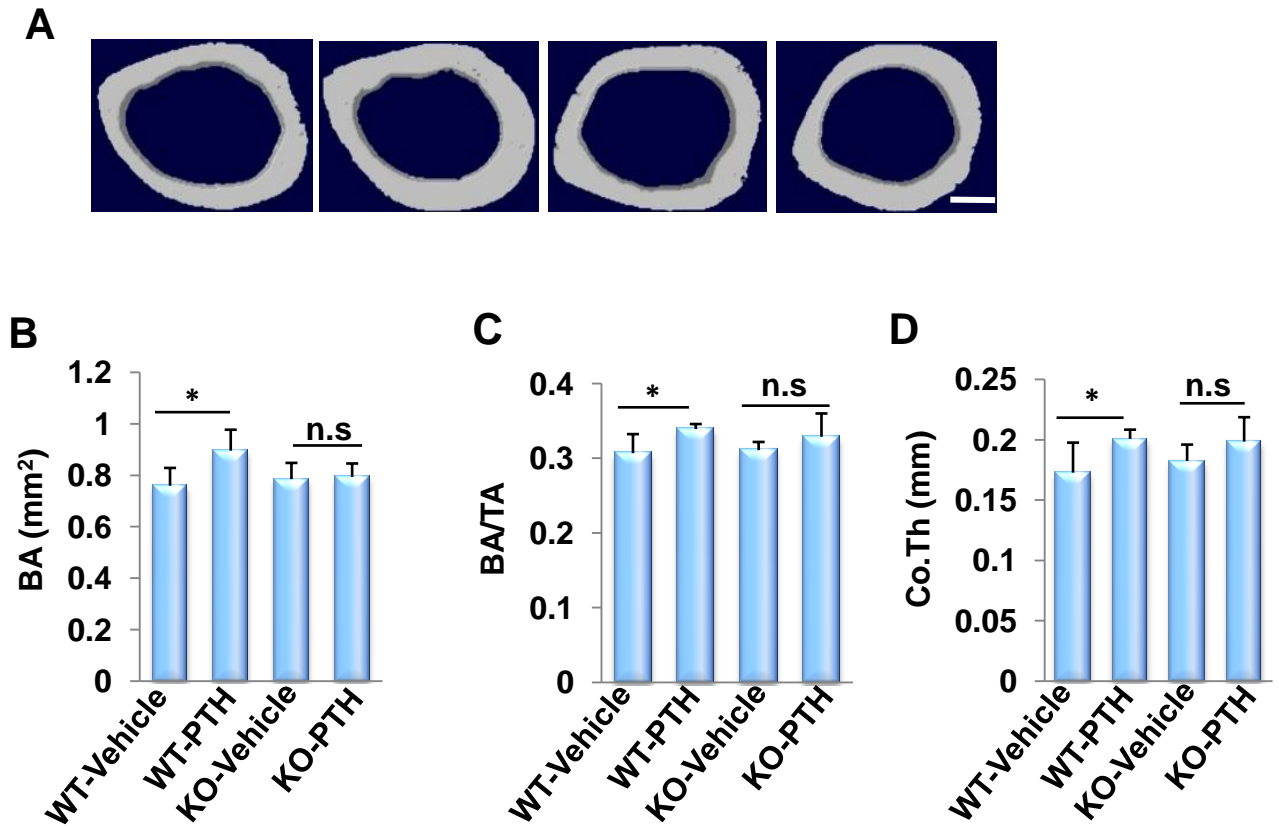**B**

C

D

Fig. S3. **Analysis of cortical bone changes in vehicle- or PTH-treated WT and LRP6 KO mice.** (**A**) Representative μCT images of cross-sections of femoral mid-diaphyses from 3 month-old male mice treated with vehicle or PTH1-34 (80μg/kg. b.w, five days a week for four weeks). Scale bar: 500μM. (**B-D**) Quantitative μCT analysis of the cortical bone tissue. Cortical bone area (BA) (**B**), cortical bone area as a percentage of total area within the periosteal circumference (BA/TA) (**C**), and cortical bone thickness (Co.Th) (**D**). n = 10; *p < 0.05. Data are presented as mean ± SEM.