

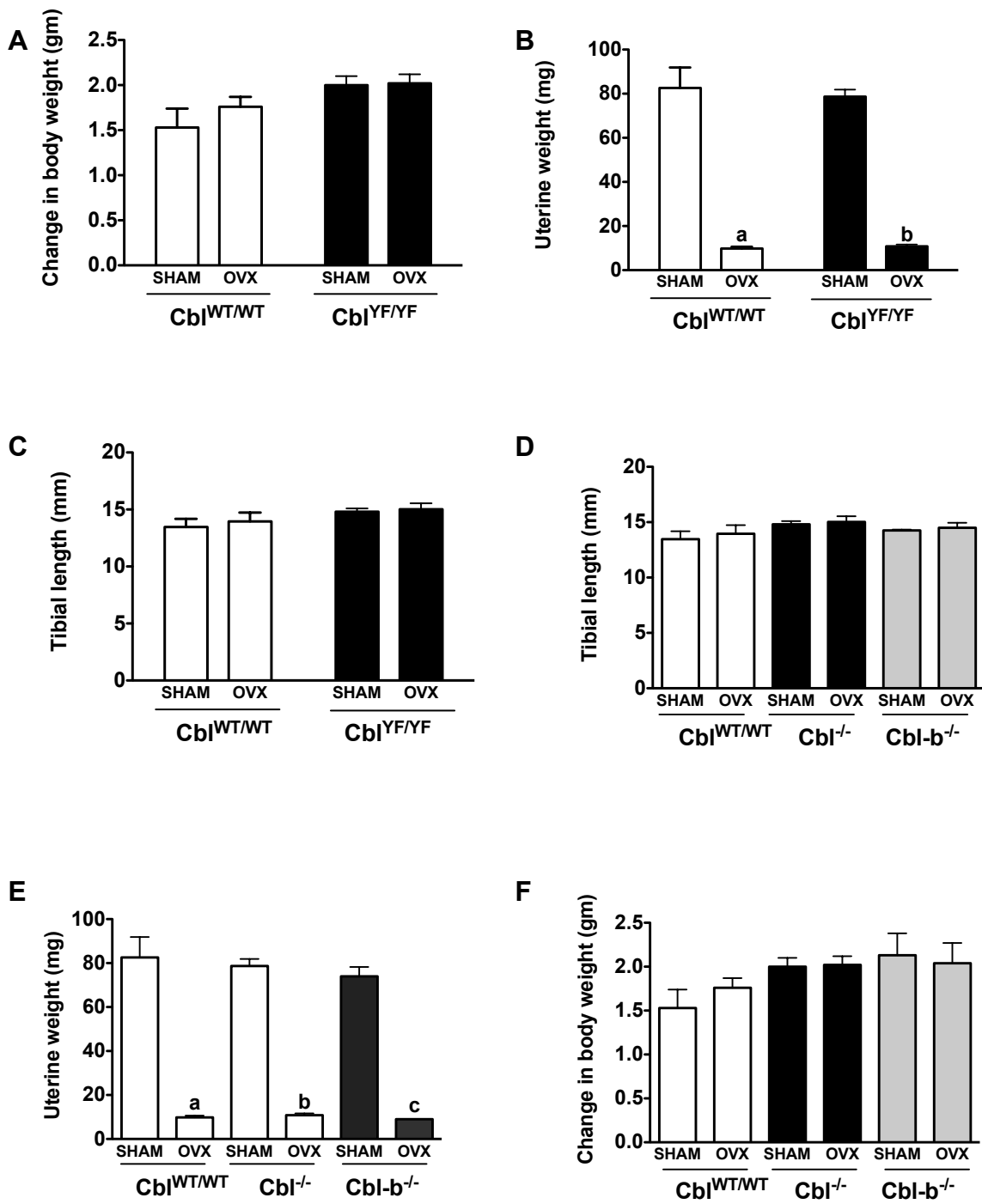
Genotype		Bone Area (mm ²)	P.Pm. (mm)	BM Area (mm ²)	E.Pm (mm)	C.Th (mm)
Cbl ^{WT/WT}	SHAM	1.12 ± 0.16	4.93 ± 0.09	0.52 ± 0.005	4.01 ± 0.015	0.15 ± 0.005
	OVX	1.21 ± 0.12	4.18 ± 0.35	0.48 ± 0.02	4.10 ± 0.06	0.15 ± 0.004
Cbl ^{YF/YF}	SHAM	1.50 ± 0.18 ^a	4.31 ± 0.41	0.65 ± 0.04	3.79 ± 0.1	0.17 ± 0.01
	OVX	1.31 ± 0.14	4.16 ± 0.13	0.61 ± 0.02	3.71 ± 0.19	0.16 ± 0.008
Cbl ^{-/-}	SHAM	1.25 ± 0.06	4.21 ± 0.44	0.49 ± 0.03	3.92 ± 0.05	0.15 ± 0.05
	OVX	1.28 ± 0.05	4.17 ± 0.56	0.47 ± 0.003	3.89 ± 0.06	0.14 ± 0.04
Cbl-b ^{-/-}	SHAM	0.86 ± 0.025 ^b	4.47 ± 0.35	0.79 ± 0.045	3.56 ± 0.20	0.13 ± 0.005
	OVX	0.76 ± 0.01	4.24 ± 0.13	0.72 ± 0.02	3.42 ± 0.10	0.11 ± 0.00 ^c

Supplementary Table 1. Cortical bone parameters of ovariectomized mice. Bone parameters of the mid-shaft region of tibia of SHAM operated and ovariectomized mice (OVX) was determined by μ CT analysis. Cortical bone area, periosteal perimeter (P.Pm), bone marrow (BM) area, endosteal perimeter (E.Pm) and cortical thickness (C.Th) as determined by μ CT analysis are shown. Values shown are mean \pm SD from SHAM n=4, OVX n=6. * p<0.05 was considered statistically significant as compared to respective controls using 2-way ANOVA with Bonferroni post-hoc test. ^aCbl^{WT/WT} SHAM vs Cbl^{YF/YF} SHAM; ^bCbl^{WT/WT} SHAM vs Cbl-b^{-/-} SHAM; ^cCbl-b^{-/-} SHAM vs OVX.

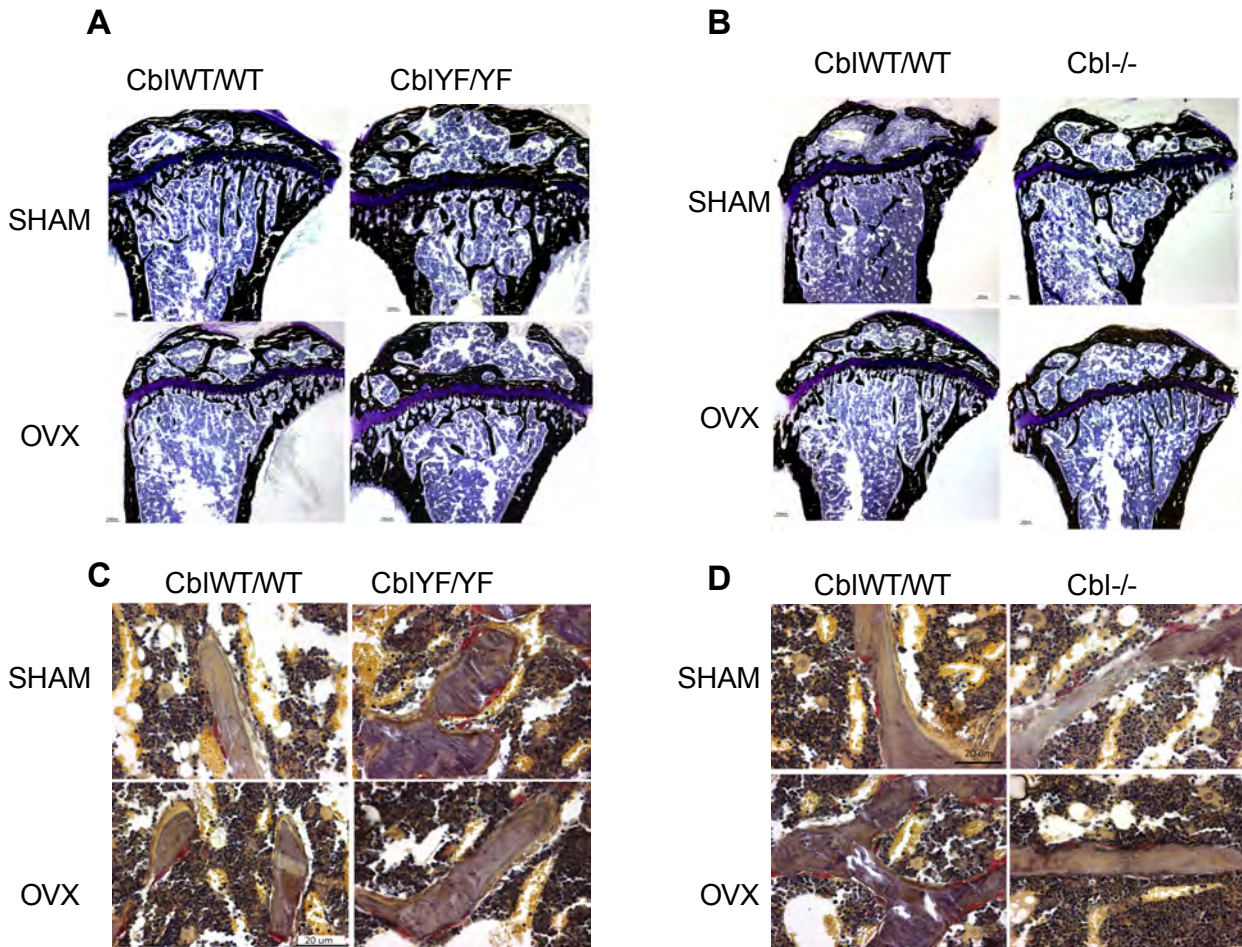
Genotype	IL-1 β (pg/ml)	IL-6 (pg/ml)	TNF- α (pg/ml)	OPN (ng/ml)
Cbl ^{WT/WT} SHAM	3.1 \pm 0.001	5.5 \pm 0.002	1.65 \pm 0.76	83.1 \pm 12.75
OVX	30.5 \pm 16.54*	5.5 \pm 0.001	4.47 \pm 1.03*	85.5 \pm 10.11
Cbl ^{-/-} SHAM	2.99 \pm 0.69	43.96 \pm 18.16	5.01 \pm 2.84	63.1 \pm 19.58
OVX	55.48 \pm 16.96*	921.11 \pm 118.2*	23.11 \pm 16.42	50.7 \pm 3.837
Cbl-b ^{-/-} SHAM	3.1 \pm 0.001	5.5 \pm 0.004	2.47 \pm 1.1	50.3 \pm 1.77
OVX	4.38 \pm 1.18*	10.35 \pm 4.8*	10.42 \pm 7.46	97.3 \pm 37.98

Supplementary Table 2. Ovariectomy resulted in increased serum levels of markers of inflammatory response in mice. Cytokine levels of interleukin-1beta (IL-1beta), interleukin-6 (IL-6), tumor necrosis factor alpha (TNF- α) and osteopontin (OPN) were measured in the serum of mice. Serum was collected from SHAM operated (n=6) and ovariectomized (OVX) mice (n=6) six weeks following surgery, and the cytokine levels were determined using ELISA. Serum levels of IL-1beta, IL-6, TNF- α and OPN are shown. Data are presented as mean \pm SD from indicated number of mice. * p<0.05 as compared to respective controls using one way ANOVA and Tukeys multiple comparison test.

Supplementary Figure. 1



Supplementary Figure 2



Supplementary Figure. 3

