

Supplementary Materials

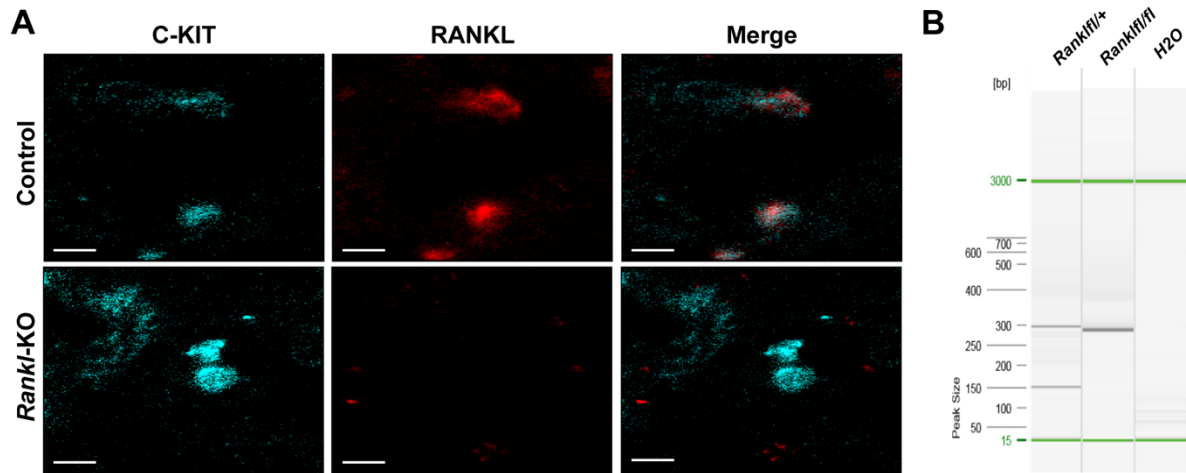


Figure S1. Specific deletion of *Rankl* in mast cells. (a) Immunofluorescent staining for RANKL and C-KIT (mast cells) in inguinal lymph nodes of control and *Rankl*-KO mice. (b) PCR-based genotyping of *Rankl*^{fl/fl}. Scale bar = 10 μ m.

Table S1. Bone phenotype of the femur of 9–13- and 21–24-week-old male mice.

Parameters	9–13 weeks		21–24 weeks	
	Control	<i>Rankl</i> -KO	Control	<i>Rankl</i> -KO
CtTMD (mgHA/cm ³)	1225 \pm 70	1213 \pm 69	1265 \pm 69	1236 \pm 47
CtTh (mm)	0.161 \pm 0.006	0.016 \pm 0.006	0.166 \pm 0.002	0.016 \pm 0.006
TMD (mgHA/cm ³)	709 \pm 69	692 \pm 37	715 \pm 35	713 \pm 37
BV/TV (%)	12.4 \pm 3.3	14.0 \pm 4.7	16.7 \pm 6.6	19.3 \pm 3.8
TbTh (mm)	0.044 \pm 0.004	0.045 \pm 0.006	0.054 \pm 0.008 [#]	0.054 \pm 0.006 [#]
TbN (1/mm)	2.8 \pm 0.62	3.01 \pm 0.68	2.99 \pm 0.92	3.55 \pm 0.43
TbSp (mm)	0.137 \pm 0.032	0.129 \pm 0.013	0.177 \pm 0.029	0.144 \pm 0.026
NOb/BPm (1/mm)	11.3 \pm 2.6	10.3 \pm 2.6	11.4 \pm 2.6	10.0 \pm 1.7
ObS/BS (%)	7.8 \pm 2.1	6.8 \pm 1.5	8.7 \pm 2.1	7.1 \pm 1.2
NOc/BPm (1/mm)	6.3 \pm 1.1	5.6 \pm 1.1	5.7 \pm 0.6	6.2 \pm 0.6
OcS/BS (%)	11.0 \pm 1.2	9.9 \pm 1.7	9.3 \pm 1.0	10.9 \pm 2.2

[#]p<0.05 compared to 9–13 weeks. n=8–10/group. HA: hydroxyapatite. CtTMD: cortical tissue mineral density. CtTh: cortical thickness. TMD: tissue mineral density. BV/TV: bone volume per tissue volume. TbTh: trabecular thickness. TbN: trabecular number. TbSp: trabecular separation. NOb/BPm: number of osteoblasts per bone perimeter. ObS/BS: osteoblast surface per bone surface. NOc/BPm: number of osteoclasts per bone perimeter. OcS/BS: osteoclast surface per bone surface.

Table S2. Flow cytometric analysis of the spleen of control and *Rankl*-KO sham and ovariectomized mice.

% of living cells	Control		<i>Rankl</i> -KO	
	sham	OVX	sham	OVX
Ly6G+/CD11b+	0.93 ± 0.28	0.53 ± 0.11 [#]	0.73 ± 0.27	0.45 ± 0.14
F4/80+/CD11b+	1.33 ± 0.23	0.97 ± 0.22	1.21 ± 0.42	1.44 ± 0.13*
CD3+	26.8 ± 3.2	25.6 ± 0.9	27.3 ± 3.0	26.0 ± 5.1
CD3+/CD4+	16.9 ± 2.1	16.0 ± 1.6	15.0 ± 1.2	16.0 ± 3.5
CD3+/CD8+	8.5 ± 1.9	7.1 ± 1.4	8.8 ± 1.3	8.4 ± 1.6
CD19+	51.1 ± 7.6	57.6 ± 4.2	50.3 ± 4.0	55.2 ± 7.4

*p<0.05 compared to control. #p<0.05 compared to 9–13 weeks. n=4–6/group. OVX: ovariectomy; neutrophils (Ly6G+/CD11b+); macrophages (F4/80+/CD11b+); T lymphocytes (CD3+); T helper cells (CD3+/CD4+); T cytotoxic cells (CD3+/CD8+); B lymphocytes (CD19+).