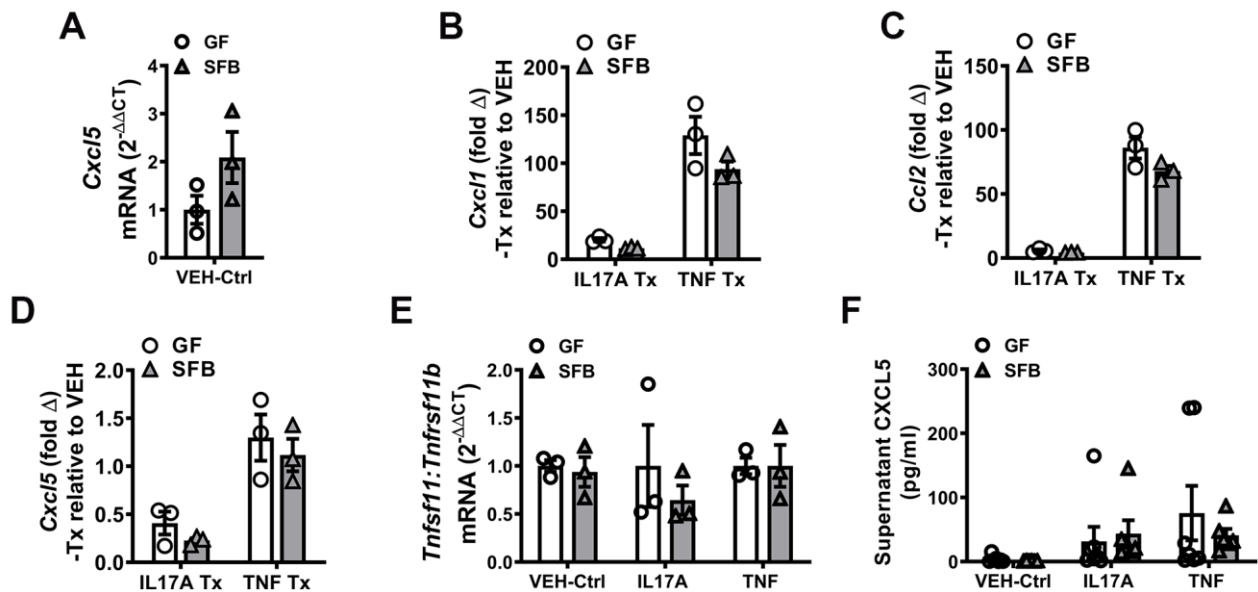


Supplemental Figure 1. Micro-CT images of maxillary first molar dentoalveolar anatomy. A. Maxillary first molar (M1) root anatomy. **B.** Sagittal view defining maxillary first, second and third molars (M1-M3). Axial view depicting buccal and lingual aspect of maxillary molars. **C.** Frontal view discerning the cemento enamel junction (CEJ) to alveolar bone crest (ABC) linear measurement at the mid-lingual aspect of the maxillary first molar.



Supplemental Figure 2. SFB actions on osteoblast-derived signaling mediators. **A.** RNA was isolated from VEH-Ctrl-stimulated osteoblasts (OBs) for qRT-PCR analysis of *Cxcl5* mRNA (n=3/gp); relative quantification of mRNA was performed via the $2^{-\Delta\Delta CT}$ method. **B-D.** qRT-PCR gene expression studies were carried out in IL17A- and TNF-stimulated OBs (n=3/gp). Relative quantification of **(B)** *Cxcl1*, **(C)** *Ccl2*, and **(D)** *Cxcl5* mRNA was performed by the $2^{-\Delta\Delta CT}$ method; data expressed as treatment (IL17A or TNF) fold change relative to control (VEH-Ctrl). **E.** qRT-PCR analysis of *Tnfsf11(Rankl):Tnfrsf11b(Opg)* ratio mRNA in VEH-Ctrl-, IL17A-, and TNF-stimulated OBs (n=3/gp). Relative quantification of mRNA was performed via the $2^{-\Delta\Delta CT}$ method. **F.** OB supernatant ELISA analysis of CXCL5 levels (n=6-7/gp). Unpaired t-test or 2-way ANOVA with Tukey post hoc test; data are reported as mean \pm SEM.

Supplemental Table 1. Supernatant CXCL1 ELISA Results			
Tukey's multiple comparisons test	Mean Difference	95% Confidence Interval	P Value
VEH-Ctrl:GF vs. VEH-Ctrl:SFB	-7.241	-103.9 to 89.45	0.0435
VEH-Ctrl:GF vs. IL17A :GF	-66.87	-159.8 to 26.03	0.2756
VEH-Ctrl:GF vs. IL17A :SFB	-78.34	-175.0 to 18.35	0.169
VEH-Ctrl:GF vs. TNF :GF	-203.1	-296.0 to -110.2	<0.0001
VEH-Ctrl:GF vs. TNF :SFB	-303.6	-400.3 to -206.9	<0.0001
VEH-Ctrl:SFB vs. IL17A :GF	-59.63	-156.3 to 37.07	0.4408
VEH-Ctrl:SFB vs. IL17A :SFB	-71.1	-171.4 to 29.24	0.2914
VEH-Ctrl:SFB vs. TNF :GF	-195.8	-292.5 to -99.15	<0.0001
VEH-Ctrl:SFB vs. TNF :SFB	-296.4	-396.7 to -196.0	<0.0001
IL17A :GF vs. IL17A :SFB	-11.47	-108.2 to 85.22	0.9991
IL17A :GF vs. TNF :GF	-136.2	-229.1 to -43.32	0.0013
IL17A :GF vs. TNF :SFB	-236.7	-333.4 to -140.0	<0.0001
IL17A :SFB vs. TNF :GF	-124.7	-221.4 to -28.05	0.0055
IL17A :SFB vs. TNF :SFB	-225.3	-325.6 to -124.9	<0.0001
TNF :GF vs. TNF :SFB	-100.5	-197.2 to -3.829	0.0378

Supplemental Table 1. 2-Way ANOVA results for CXCL1 protein in supernatants derived from vehicle-control, IL17A, or TNF treated GF vs. SFB osteoblast cultures.

Supplemental Table 2. Supernatant CCL2 ELISA Results			
Tukey's multiple comparisons test	Mean Difference	95% Confidence Interval	P Value
VEH-Ctrl:GF vs. VEH-Ctrl:SFB	-7.27	-87.68 to 73.14	0.9998
VEH-Ctrl:GF vs. IL17A :GF	-122.5	-199.8 to -45.28	0.0004
VEH-Ctrl:GF vs. IL17A :SFB	-140.3	-220.7 to -59.90	0.0001
VEH-Ctrl:GF vs. TNF :GF	-821.6	-898.8 to -744.3	<0.0001
VEH-Ctrl:GF vs. TNF :SFB	-929.6	-1010 to -849.2	<0.0001
VEH-Ctrl:SFB vs. IL17A :GF	-115.3	-195.7 to -34.85	0.0017
VEH-Ctrl:SFB vs. IL17A :SFB	-133	-216.5 to -49.59	0.0004
VEH-Ctrl:SFB vs. TNF :GF	-814.3	-894.7 to -733.9	<0.0001
VEH-Ctrl:SFB vs. TNF :SFB	-922.3	-1006 to -838.9	<0.0001
IL17A :GF vs. IL17A :SFB	-17.77	-98.18 to 62.64	0.9842
IL17A :GF vs. TNF :GF	-699.1	-776.3 to -621.8	<0.0001
IL17A :GF vs. TNF :SFB	-807.1	-887.5 to -726.7	<0.0001
IL17A :SFB vs. TNF :GF	-681.3	-761.7 to -600.9	<0.0001
IL17A :SFB vs. TNF :SFB	-789.3	-872.8 to -705.9	<0.0001
TNF :GF vs. TNF :SFB	-108	-188.4 to -27.62	0.0035

Supplemental Table 2. 2-Way ANOVA results for CCL2 protein in supernatants derived from vehicle-control, IL17A, or TNF treated GF vs. SFB osteoblast cultures.

Supplemental Table 3. Number of osteoclasts per well (N.Oc/well) in RAW264.7 cells			
Tukey's multiple comparisons test	Mean Difference	95% Confidence Interval	P Value
VEH-Ctrl:GF vs. VEH-Ctrl:SFB	-10.97	-19.28 to -2.659	0.0017
VEH-Ctrl:GF vs. IL17A :GF	-20.57	-28.55 to -12.59	<0.0001
VEH-Ctrl:GF vs. IL17A :SFB	-35.47	-43.78 to -27.16	<0.0001
VEH-Ctrl:GF vs. TNF :GF	-51.67	-59.65 to -43.68	<0.0001
VEH-Ctrl:GF vs. TNF :SFB	-54.13	-62.44 to -45.83	<0.0001
VEH-Ctrl:GF vs. VEH- α CXCL1 α CCL2:GF	5.857	-2.126 to 13.84	0.3669
VEH-Ctrl:GF vs. VEH- α CXCL1 α CCL2:SFB	5.31	-3.000 to 13.62	0.5798
VEH-Ctrl:GF vs. IL17A- α CXCL1 α CCL2:GF	2.143	-5.840 to 10.13	0.9988
VEH-Ctrl:GF vs. IL17A- α CXCL1 α CCL2:SFB	0.3651	-7.944 to 8.674	>0.9999
VEH-Ctrl:GF vs. TNF- α CXCL1 α CCL2:GF	0.4286	-7.555 to 8.412	>0.9999
VEH-Ctrl:GF vs. TNF- α CXCL1 α CCL2:SFB	-0.6905	-9.000 to 7.619	>0.9999
VEH-Ctrl:SFB vs. IL17A :GF	-9.603	-17.91 to -1.294	0.0108
VEH-Ctrl:SFB vs. IL17A :SFB	-24.5	-33.12 to -15.88	<0.0001
VEH-Ctrl:SFB vs. TNF :GF	-40.7	-49.01 to -32.39	<0.0001
VEH-Ctrl:SFB vs. TNF :SFB	-43.17	-51.79 to -34.54	<0.0001
VEH-Ctrl:SFB vs. VEH- α CXCL1 α CCL2:GF	16.83	8.516 to 25.13	<0.0001
VEH-Ctrl:SFB vs. VEH- α CXCL1 α CCL2:SFB	16.28	7.655 to 24.90	<0.0001
VEH-Ctrl:SFB vs. IL17A- α CXCL1 α CCL2:GF	13.11	4.802 to 21.42	<0.0001
VEH-Ctrl:SFB vs. IL17A- α CXCL1 α CCL2:SFB	11.33	2.711 to 19.96	0.0019
VEH-Ctrl:SFB vs. TNF- α CXCL1 α CCL2:GF	11.4	3.088 to 19.71	0.0009
VEH-Ctrl:SFB vs. TNF- α CXCL1 α CCL2:SFB	10.28	1.655 to 18.90	0.0073
IL17A :GF vs. IL17A :SFB	-14.9	-23.21 to -6.588	<0.0001
IL17A :GF vs. TNF :GF	-31.1	-39.08 to -23.11	<0.0001
IL17A :GF vs. TNF :SFB	-33.56	-41.87 to -25.25	<0.0001
IL17A :GF vs. VEH- α CXCL1 α CCL2:GF	26.43	18.45 to 34.41	<0.0001
IL17A :GF vs. VEH- α CXCL1 α CCL2:SFB	25.88	17.57 to 34.19	<0.0001
IL17A :GF vs. IL17A- α CXCL1 α CCL2:GF	22.71	14.73 to 30.70	<0.0001
IL17A :GF vs. IL17A- α CXCL1 α CCL2:SFB	20.94	12.63 to 29.25	<0.0001
IL17A :GF vs. TNF- α CXCL1 α CCL2:GF	21	13.02 to 28.98	<0.0001
IL17A :GF vs. TNF- α CXCL1 α CCL2:SFB	19.88	11.57 to 28.19	<0.0001
IL17A :SFB vs. TNF :GF	-16.2	-24.51 to -7.889	<0.0001
IL17A :SFB vs. TNF :SFB	-18.67	-27.29 to -10.04	<0.0001
IL17A :SFB vs. VEH- α CXCL1 α CCL2:GF	41.33	33.02 to 49.63	<0.0001
IL17A :SFB vs. VEH- α CXCL1 α CCL2:SFB	40.78	32.16 to 49.40	<0.0001
IL17A :SFB vs. IL17A- α CXCL1 α CCL2:GF	37.61	29.30 to 45.92	<0.0001
IL17A :SFB vs. IL17A- α CXCL1 α CCL2:SFB	35.83	27.21 to 44.46	<0.0001
IL17A :SFB vs. TNF- α CXCL1 α CCL2:GF	35.9	27.59 to 44.21	<0.0001
IL17A :SFB vs. TNF- α CXCL1 α CCL2:SFB	34.78	26.15 to 43.40	<0.0001
TNF :GF vs. TNF :SFB	-2.468	-10.78 to 5.841	0.997
TNF :GF vs. VEH- α CXCL1 α CCL2:GF	57.52	49.54 to 65.51	<0.0001
TNF :GF vs. VEH- α CXCL1 α CCL2:SFB	56.98	48.67 to 65.29	<0.0001
TNF :GF vs. IL17A- α CXCL1 α CCL2:GF	53.81	45.83 to 61.79	<0.0001
TNF :GF vs. IL17A- α CXCL1 α CCL2:SFB	52.03	43.72 to 60.34	<0.0001
TNF :GF vs. TNF- α CXCL1 α CCL2:GF	52.1	44.11 to 60.08	<0.0001
TNF :GF vs. TNF- α CXCL1 α CCL2:SFB	50.98	42.67 to 59.29	<0.0001
TNF :SFB vs. VEH- α CXCL1 α CCL2:GF	59.99	51.68 to 68.30	<0.0001
TNF :SFB vs. VEH- α CXCL1 α CCL2:SFB	59.44	50.82 to 68.07	<0.0001
TNF :SFB vs. IL17A- α CXCL1 α CCL2:GF	56.28	47.97 to 64.59	<0.0001
TNF :SFB vs. IL17A- α CXCL1 α CCL2:SFB	54.5	45.88 to 63.12	<0.0001
TNF :SFB vs. TNF- α CXCL1 α CCL2:GF	54.56	46.25 to 62.87	<0.0001
TNF :SFB vs. TNF- α CXCL1 α CCL2:SFB	53.44	44.82 to 62.07	<0.0001
VEH- α CXCL1 α CCL2:GF vs. VEH- α CXCL1 α CCL2:SFB	-0.5476	-8.857 to 7.762	>0.9999
VEH- α CXCL1 α CCL2:GF vs. IL17A- α CXCL1 α CCL2:GF	-3.714	-11.70 to 4.269	0.9114
VEH- α CXCL1 α CCL2:GF vs. IL17A- α CXCL1 α CCL2:SFB	-5.492	-13.80 to 2.817	0.5284
VEH- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:GF	-5.429	-13.41 to 2.555	0.4844
VEH- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:SFB	-6.548	-14.86 to 1.761	0.2644
VEH- α CXCL1 α CCL2:SFB vs. IL17A- α CXCL1 α CCL2:GF	-3.167	-11.48 to 5.142	0.9775
VEH- α CXCL1 α CCL2:SFB vs. IL17A- α CXCL1 α CCL2:SFB	-4.944	-13.57 to 3.678	0.7285
VEH- α CXCL1 α CCL2:SFB vs. TNF- α CXCL1 α CCL2:GF	-4.881	-13.19 to 3.428	0.6981
VEH- α CXCL1 α CCL2:SFB vs. TNF- α CXCL1 α CCL2:SFB	-6	-14.62 to 2.623	0.4485
IL17A- α CXCL1 α CCL2:GF vs. IL17A- α CXCL1 α CCL2:SFB	-1.778	-10.09 to 6.531	0.9999
IL17A- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:GF	-1.714	-9.697 to 6.269	0.9999
IL17A- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:SFB	-2.833	-11.14 to 5.476	0.9905
IL17A- α CXCL1 α CCL2:SFB vs. TNF- α CXCL1 α CCL2:GF	0.06349	-8.246 to 8.373	>0.9999
IL17A- α CXCL1 α CCL2:SFB vs. TNF- α CXCL1 α CCL2:SFB	-1.056	-9.678 to 7.567	>0.9999
TNF- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:SFB	-1.119	-9.428 to 7.190	>0.9999

Supplemental Table 3. 2-Way ANOVA results for Number of Osteoclasts per well in RAW264.7 cells stimulated with supernatants derived from vehicle-control, IL17A, or TNF treated GF vs. SFB osteoblast cultures.

Supplemental Table 4. Osteoclast size (Oc.Ar/Oc) in RAW264.7 cells			
Tukey's multiple comparisons test	Mean Difference	95% Confidence Interval	P Value
VEH-Ctrl:GF vs. VEH-Ctrl:SFB	-248.1	-454.9 to -41.26	0.0067
VEH-Ctrl:GF vs. IL17A:GF	-45.55	-244.3 to 153.2	0.9997
VEH-Ctrl:GF vs. IL17A:SFB	-150.6	-349.3 to 48.13	0.32
VEH-Ctrl:GF vs. TNF :GF	-282.9	-481.6 to -84.15	0.0005
VEH-Ctrl:GF vs. TNF :SFB	-331.2	-538.1 to -124.4	<0.0001
VEH-Ctrl:GF vs. VEH- α CXCL1 α CCL2:GF	18.86	-179.8 to 217.6	>0.9999
VEH-Ctrl:GF vs. VEH- α CXCL1 α CCL2:SFB	-23.43	-222.1 to 175.3	>0.9999
VEH-Ctrl:GF vs. IL17A- α CXCL1 α CCL2:GF	35.57	-163.1 to 234.3	>0.9999
VEH-Ctrl:GF vs. IL17A- α CXCL1 α CCL2:SFB	57.6	-149.2 to 264.4	0.9984
VEH-Ctrl:GF vs. TNF- α CXCL1 α CCL2:GF	31.71	-167.0 to 230.4	>0.9999
VEH-Ctrl:GF vs. TNF- α CXCL1 α CCL2:SFB	-97.24	-304.1 to 109.6	0.9063
VEH-Ctrl:SFB vs. IL17A:GF	202.5	-4.294 to 409.3	0.0603
VEH-Ctrl:SFB vs. IL17A:SFB	97.5	-109.3 to 304.3	0.9048
VEH-Ctrl:SFB vs. TNF :GF	-34.79	-241.6 to 172.0	>0.9999
VEH-Ctrl:SFB vs. TNF :SFB	-83.17	-297.8 to 131.5	0.9748
VEH-Ctrl:SFB vs. VEH- α CXCL1 α CCL2:GF	266.9	60.11 to 473.7	0.0024
VEH-Ctrl:SFB vs. VEH- α CXCL1 α CCL2:SFB	224.6	17.83 to 431.5	0.0219
VEH-Ctrl:SFB vs. IL17A- α CXCL1 α CCL2:GF	283.6	76.83 to 490.5	0.0009
VEH-Ctrl:SFB vs. IL17A- α CXCL1 α CCL2:SFB	305.7	91.04 to 520.3	0.0005
VEH-Ctrl:SFB vs. TNF- α CXCL1 α CCL2:GF	279.8	72.97 to 486.6	0.0012
VEH-Ctrl:SFB vs. TNF- α CXCL1 α CCL2:SFB	150.8	-63.79 to 365.5	0.4343
IL17A:GF vs. IL17A:SFB	-105	-303.7 to 93.68	0.8182
IL17A:GF vs. TNF :GF	-237.3	-436.0 to -38.60	0.0071
IL17A:GF vs. TNF :SFB	-285.7	-492.5 to -78.87	0.0008
IL17A:GF vs. VEH- α CXCL1 α CCL2:GF	64.41	-134.3 to 263.1	0.9939
IL17A:GF vs. VEH- α CXCL1 α CCL2:SFB	22.12	-176.6 to 220.8	>0.9999
IL17A:GF vs. IL17A- α CXCL1 α CCL2:GF	81.12	-117.6 to 279.8	0.9632
IL17A:GF vs. IL17A- α CXCL1 α CCL2:SFB	103.1	-103.7 to 310.0	0.8674
IL17A:GF vs. TNF- α CXCL1 α CCL2:GF	77.26	-121.4 to 276.0	0.9741
IL17A:GF vs. TNF- α CXCL1 α CCL2:SFB	-51.69	-258.5 to 155.1	0.9994
IL17A:SFB vs. TNF :GF	-132.3	-331.0 to 66.42	0.5187
IL17A:SFB vs. TNF :SFB	-180.7	-387.5 to 26.15	0.1449
IL17A:SFB vs. VEH- α CXCL1 α CCL2:GF	169.4	-29.27 to 368.1	0.1696
IL17A:SFB vs. VEH- α CXCL1 α CCL2:SFB	127.1	-71.56 to 325.8	0.5793
IL17A:SFB vs. IL17A- α CXCL1 α CCL2:GF	186.1	-12.56 to 384.8	0.0872
IL17A:SFB vs. IL17A- α CXCL1 α CCL2:SFB	208.2	1.351 to 415.0	0.0471
IL17A:SFB vs. TNF- α CXCL1 α CCL2:GF	182.3	-16.42 to 381.0	0.1024
IL17A:SFB vs. TNF- α CXCL1 α CCL2:SFB	53.33	-153.5 to 260.1	0.9992
TNF :GF vs. TNF :SFB	-48.38	-255.2 to 158.4	0.9997
TNF :GF vs. VEH- α CXCL1 α CCL2:GF	301.7	103.0 to 500.4	0.0002
TNF :GF vs. VEH- α CXCL1 α CCL2:SFB	259.4	60.73 to 458.1	0.002
TNF :GF vs. IL17A- α CXCL1 α CCL2:GF	318.4	119.7 to 517.1	<0.0001
TNF :GF vs. IL17A- α CXCL1 α CCL2:SFB	340.5	133.6 to 547.3	<0.0001
TNF :GF vs. TNF- α CXCL1 α CCL2:GF	314.6	115.9 to 513.3	<0.0001
TNF :GF vs. TNF- α CXCL1 α CCL2:SFB	185.6	-21.20 to 392.4	0.1203
TNF :SFB vs. VEH- α CXCL1 α CCL2:GF	350.1	143.3 to 556.9	<0.0001
TNF :SFB vs. VEH- α CXCL1 α CCL2:SFB	307.8	101.0 to 514.6	0.0002
TNF :SFB vs. IL17A- α CXCL1 α CCL2:GF	366.8	160.0 to 573.6	<0.0001
TNF :SFB vs. IL17A- α CXCL1 α CCL2:SFB	388.8	174.2 to 603.5	<0.0001
TNF :SFB vs. TNF- α CXCL1 α CCL2:GF	363	156.1 to 569.8	<0.0001
TNF :SFB vs. TNF- α CXCL1 α CCL2:SFB	234	19.38 to 448.6	0.021
VEH- α CXCL1 α CCL2:GF vs. VEH- α CXCL1 α CCL2:SFB	-42.29	-241.0 to 156.4	0.9999
VEH- α CXCL1 α CCL2:GF vs. IL17A- α CXCL1 α CCL2:GF	16.71	-182.0 to 215.4	>0.9999
VEH- α CXCL1 α CCL2:GF vs. IL17A- α CXCL1 α CCL2:SFB	38.74	-168.1 to 245.6	>0.9999
VEH- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:GF	12.86	-185.8 to 211.6	>0.9999
VEH- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:SFB	-116.1	-322.9 to 90.72	0.7551
VEH- α CXCL1 α CCL2:SFB vs. IL17A- α CXCL1 α CCL2:GF	59	-139.7 to 257.7	0.9971
VEH- α CXCL1 α CCL2:SFB vs. IL17A- α CXCL1 α CCL2:SFB	81.02	-125.8 to 287.8	0.9727
VEH- α CXCL1 α CCL2:SFB vs. TNF- α CXCL1 α CCL2:GF	55.14	-143.6 to 253.8	0.9984
VEH- α CXCL1 α CCL2:SFB vs. TNF- α CXCL1 α CCL2:SFB	-73.81	-280.6 to 133.0	0.9866
IL17A- α CXCL1 α CCL2:GF vs. IL17A- α CXCL1 α CCL2:SFB	22.02	-184.8 to 228.8	>0.9999
IL17A- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:GF	-3.857	-202.6 to 194.8	>0.9999
IL17A- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:SFB	-132.8	-339.6 to 74.01	0.5739
IL17A- α CXCL1 α CCL2:SFB vs. TNF- α CXCL1 α CCL2:GF	-25.88	-232.7 to 180.9	>0.9999
IL17A- α CXCL1 α CCL2:SFB vs. TNF- α CXCL1 α CCL2:SFB	-154.8	-369.5 to 59.79	0.3937
TNF- α CXCL1 α CCL2:GF vs. TNF- α CXCL1 α CCL2:SFB	-129	-335.8 to 77.86	0.6175

Supplemental Table 4. 2-Way ANOVA results for Osteoclast Size in RAW264.7 cells stimulated with supernatants derived from vehicle-control, IL17A, or TNF treated GF vs. SFB osteoblast cultures.