





**Figure S1:** PBS or TNF- $\alpha$  (3.0 µg/day) was injected in the supracalvarial region of C57BL/6J mice, once daily for 5 days. Harvested calvariae were fixed overnight in 4% paraformaldehyde at 4°C. Samples were decalcified in 14% EDTA for 3 days at 4°C. After dehydration, samples were embedded in paraffin and cut in coronal sections of 5 µm thickness. For immunohistochemical staining, paraffin sections were deparaffinized, rehydrated, and then treated with 3% H<sub>2</sub>O<sub>2</sub> for 15 min. Thereafter, sections were blocked with 5% skim milk for 30 min at 37°C and treated with anti-calcitonin receptor (CTR) antibody ab11042 (1:50 diluted in blocking buffer; R&D Systems) overnight at 4°C. After sections had been rinsed, they were processed with VECTASTAIN Elite ABC Kit PK-6101 (Vector Laboratories, USA) and treated with 3,3'-diaminobenzidine (DAB). Hematoxylin was used for counterstaining.

(A) Serial sections in which TNF- $\alpha$  (3.0 µg/day) was injected into calvariae of mice, once daily for 5 days. Left image is TRAP staining and right image is immunohistochemical staining. *Black arrow* indicates the bone resorption area. *White arrowheads* indicate multinucleated TRAP-positive cells. *Black arrowheads* indicate calcitonin receptor (CTR)-positive cells. Scale bars = 100 µm. (B) (Images) Histological sections of calvariae were immunolocalized with antibodies specific for calcitonin receptor. *Black arrowheads* indicate CTR-positive cells. Scale bars = 100 µm. (Graph) The numbers of CTR-positive cells on the calvariae (n = 4; \*\*P < 0.01).